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Three new *Uroplectes* (Scorpiones: Buthidae) with punctate metasomal segments from tropical central Africa

LORENZO PRENDINI[1]

ABSTRACT

The scorpion fauna of tropical central Africa is poorly known and may be more diverse than generally recognized. The present contribution describes three morphologically similar, and probably monophyletic species of *Uroplectes* Peters, 1861, which have gone undetected, despite being distributed across a large area, extending from the Democratic Republic of Congo to Malawi, Mozambique, Zambia, and Zimbabwe. *Uroplectes malawicus*, sp. nov., and *Uroplectes zambezicus*, sp. nov., occurring south of Lake Malawi and in the Zambezi River Valley, respectively, appear to be sister species. *Uroplectes katangensis*, sp. nov., is based on a single female from the southeastern Democratic Republic of Congo. Based on their punctate metasomal segments, the new species appear to be most closely related to *Uroplectes chubbi* Hirst, 1911. The markedly concave, shagreened dorsomedian surfaces on metasomal segments I–IV resemble the stridulatory surfaces on the metasomal segments of most *Parabuthus* Pocock, 1890, and, together with the robust metasoma and worn tips of the aculeus observed in some specimens, suggest that these species may also be capable of stridulation. Based on examination of type material, the following synonyms were confirmed: *Scorpiobuthus apatris* Werner, 1939 = *Uroplectes chubbi* Hirst, 1911; *Uroplectes jutrzenkai* Penther, 1900 = *Uroplectes vittatus* (Thorell, 1876). The following new synonyms are presented: *Uroplectes andreae* Pocock, 1899 = *Uroplectes occidentalis* Simon, 1876, new synonym; *Uroplectes chubbi briodi* Schenkel, 1932 = *Uroplectes vittatus* (Thorell, 1876), new synonym. Lectotypes are designated for *U. chubbi* and *U. jutrzenkai*.

KEYWORDS: Scorpiones, Buthidae, Malawi, Democratic Republic of Congo, Mozambique, Zimbabwe, biodiversity, systematics, taxonomy

[1] Scorpion Systematics Research Group, Division of Invertebrate Zoology, American Museum of Natural History.

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INTRODUCTION

Although generally considered rather depauperate compared to the scorpion faunas of east and southern Africa or Africa north of the Sahara, the scorpion fauna of tropical west and central Africa also remains poorly known (Prendini, 2004a; Vignoli and Prendini, 2008). Most of the material from this area dates to the colonial period or earlier. Few parts of the region have been surveyed since, fewer still using modern collecting methods like ultraviolet (UV) light detection. Consequently, it is unsurprising that novelties have been discovered in the few areas where such methods have been applied, hinting at potentially greater diversity. One such example was the discovery of a second species of *Akentrobuthus* Lamoral, 1976, in Benin, more than 2600 km from the known records of the first species described from the eastern Democratic Republic of Congo (Vignoli and Prendini, 2008). Another example, reported here, are three morphologically similar, and probably monophyletic species of *Uroplectes* Peters, 1861, which have gone undetected, despite being distributed across a large area, extending from the Democratic Republic of Congo to Malawi, Mozambique, Zambia, and Zimbabwe.

Uroplectes malawicus, sp. nov., and *Uroplectes zambezicus*, sp. nov., occurring south of Lake Malawi and in the Zambezi River Valley, respectively (fig. 1), appear to be sister species. *Uroplectes katangensis*, sp. nov., is based on a single female from the southeastern Democratic Republic of Congo. The three species differ in coloration, the number of median denticle subrows on the fixed and movable fingers of the pedipalp chela, and the size and shape of the basal pectinal tooth of the female.

The present contribution is based on most if not all available material for *U. katangensis*, sp. nov., *U. malawicus*, sp. nov., and *U. zambezicus*, sp. nov. The complete scorpion holdings of all natural history collections in southern Africa have been examined by the author, as have all or most of the holdings of southern African scorpions in several major collections in Europe (Museé Royal de l'Afrique Centrale, Tervuren, Belgium; Museum für Naturkunde, Berlin; Natural History Museum, London; Zoologisches Museum, Universität Hamburg, Germany) and the United States (American Museum of Natural History, New York; California Academy of Sciences, San Francisco; Field Museum of Natural History, Chicago), but no additional specimens were encountered, besides those listed herein. The considerable gap between the known locality records of *U. katangensis*, sp. nov., to the north, and the other two species, to the south (fig. 1), therefore appears to be a true reflection of the absence of material for these taxa. The absence of material cannot be explained solely as a deficiency in sampling effort, however, because other scorpion taxa occurring in the region, e.g., *Babycurus crassicaudatus* Roewer, 1952, *Hottentotta* spp., *Isometrus maculatus* (DeGeer, 1778), *Lychas asper* (Pocock, 1891), *Pandinurus viatoris* (Pocock, 1890), and *Uroplectes occidentalis* Simon, 1876, are much better represented in collections such as the Museé Royal de l'Afrique Centrale. The discrepancy between the quantity of material available for these species and the three new species described in the present contribution suggests that the new species are more difficult to collect with traditional methods (e.g., turning stones), consistent with the observation that most of the material reported herein was collected by UV light detection at night or with pitfall traps. The three new species may prove to be more common and additional, undescribed scorpion taxa may be discovered when the region is more extensively surveyed with similar methods.

AFFINITIES WITH *UROPLECTES CHUBBI*

Based on the following combination of characters, the three new species appear to be most closely related to *Uroplectes chubbi* Hirst, 1911, a poorly collected and taxonomically confused species recorded from Botswana, Mozambique, South Africa, Zambia, and Zimbabwe (Newlands and Martindale, 1980; FitzPatrick, 1996, 2001; Fet and Lowe, 2000; Prendini, 2005a): metasoma, lateral and ventral surfaces smooth, acarinate and markedly punctate (fig. 2B, D, F), segments IV and V more setose than preceding segments, especially on dorsosubmedian and dorsolateral carinae; telson vesicle, lateral and ventral surfaces smooth, acarinate and markedly punctate, with small, blunt subaculear tubercle, ventral surfaces moderately setose, becoming more so distally at base of aculeus and around subaculear tubercle; metasoma and telson, base coloration progressively darkening posteriorly, with segment IV, and to a greater extent, segment V and telson, darker than preceding segments; chela manus, prodorsal surface with multiple spiniform granules and macrosetae distally (especially in adult male).

Several paratypes of *U. zambezicus*, sp. nov., were previously misidentified as *U. chubbi* (FitzPatrick, 1996, 2001). However, this species, as well as *U. malawicus*, sp. nov., and *U. katangensis*, sp. nov., differ markedly from *U. chubbi* in the following respects. Adults of the three new species are smaller (total length, 20–29 mm, average 25 mm, $n = 25$) than adults of *U. chubbi* (total length, 29–41 mm, average 35 mm, $n = 12$). Their habitus is robust and compact, the pedipalps shorter, with a broader chela manus (more so in the adult male) and shorter fingers, and the metasomal segments and telson short and broad (more so in the adult female), whereas the habitus of *U. chubbi* is gracile, the pedipalps longer and more slender, with a narrower chela manus and longer fingers (more so in the adult female), and the metasomal segments and telson longer and narrower (more so in the adult male). The difference in habitus is consistent with the difference in habitat between *U. chubbi*, which is epigeic and corticolous (Prendini, 2001), and the three new species, two of which are hemiedaphic and corticolous or lapidicolous (no data are available for *U. katangensis*, sp. nov.).

The three new species also differ from *U. chubbi* in coloration, being generally more infuscate (fig. 2B, D, F) than the latter. The carapace is mostly infuscate in the new species, whereas the carapace is immaculate, except for an infuscate median band, in *U. chubbi*. The tergites of the new species are also mostly infuscate, except for an immaculate median stripe in *U. zambezicus*, sp. nov., whereas the tergites of *U. chubbi* are mostly immaculate, except for two narrow infuscate stripes submedially and another two sublaterally. The chelicerae are partially infuscate in *U. malawicus*, sp. nov., and *U. katangensis*, sp. nov., whereas they are immaculate in *U. zambezicus*, sp. nov., and *U. chubbi*. The pedipalp chela manus of the three new species is infuscate, contrasting with the mostly or entirely immaculate chela fingers, patella, femur, and trochanter, whereas the pedipalp of *U. chubbi* is immaculate, except for the chela fingers, which are infuscate. Finally, the dorsomedian surfaces of metasomal segments I–IV are more concave and coarsely shagreened in the new species than in *U. chubbi*. Indeed, the markedly concave, shagreened dorsomedian surfaces on metasomal segments I–IV of these species resemble the stridulatory surfaces on the metasomal segments of most *Parabuthus* Pocock, 1890 (Prendini, 2004b; Prendini and Esposito, 2010) and, together with the robust metasoma and worn tips of the aculeus observed in some specimens, suggest that these species may also be capable of stridulation.

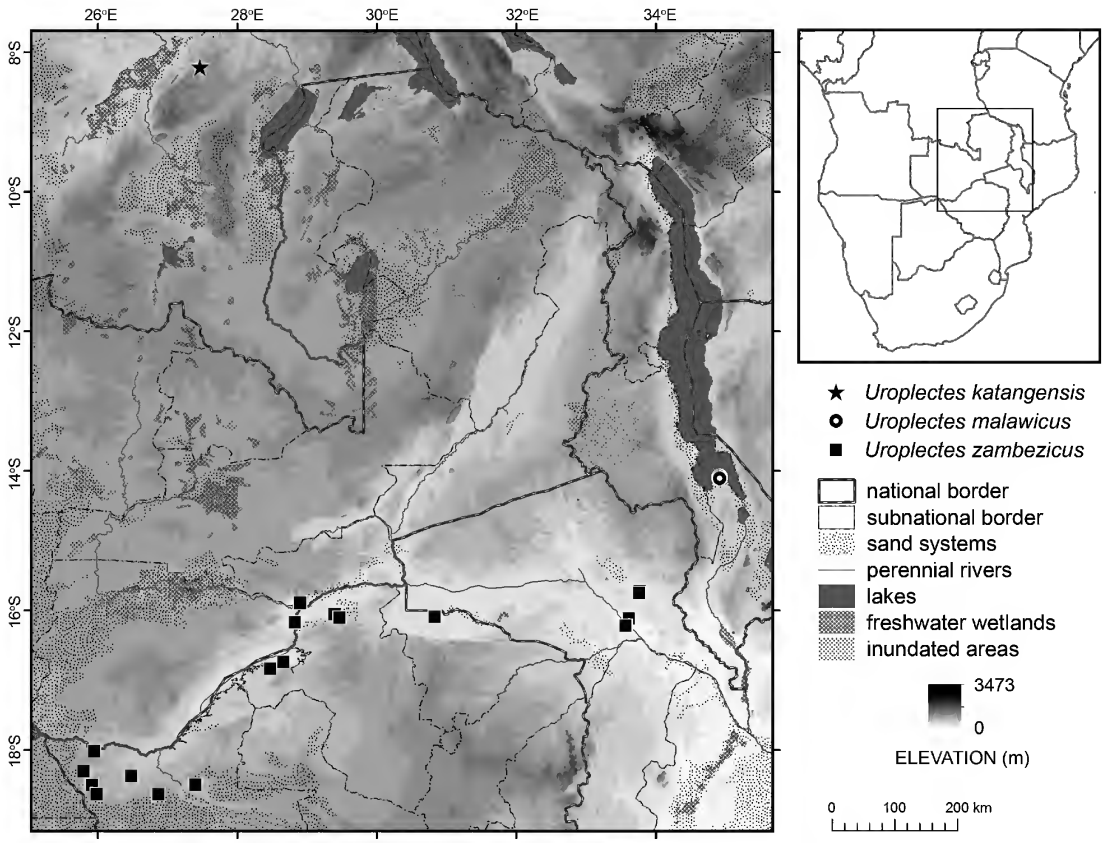

FIGURE 1. Map plotting the known distribution of *Uroplectes malawicus*, sp. nov. (circles), *Uroplectes katangensis*, sp. nov. (star), and *Uroplectes zambezicus*, sp. nov. (squares), in the Democratic Republic of Congo, Malawi, Mozambique, Zambia, and Zimbabwe.

METHODS

Scorpions collected by the author were found mostly by searching at night using portable UV lamps, comprising a pair of mercury-vapor tubes attached to a chromium parabolic reflector and powered by a rechargeable 7 Amp/hr, 12 V battery, or UV light emitting diode (LED) flashlights. A portable Garmin™ GPS V Plus device was used for recording the geographical coordinates of collection localities in the field.

Material examined is deposited in the Albany Museum, Grahamstown, South Africa (AM), American Museum of Natural History, New York (AMNH), Museé Royal de l'Afrique Centrale, Tervuren, Belgium (MRAC), Naturhistorisches Museum, Basel, Switzerland (NMB), Naturhistorisches Museum, Wien, Austria (NHMW), Natural History Museum, London (BMNH), Natural History Museum of Zimbabwe, Bulawayo (NHMZ), Natal Museum, Pietermaritzburg, South Africa (NMSA), Zoologisches Forschungsmuseum Alexander Koenig, Bonn, Germany (ZFMK), and Zoologisches Museum, Universität Hamburg, Germany (ZMH). Tissue samples for DNA isolation are stored in the Ambrose Monell Collection for Molecular and Microbial Research (AMCC) at the AMNH.

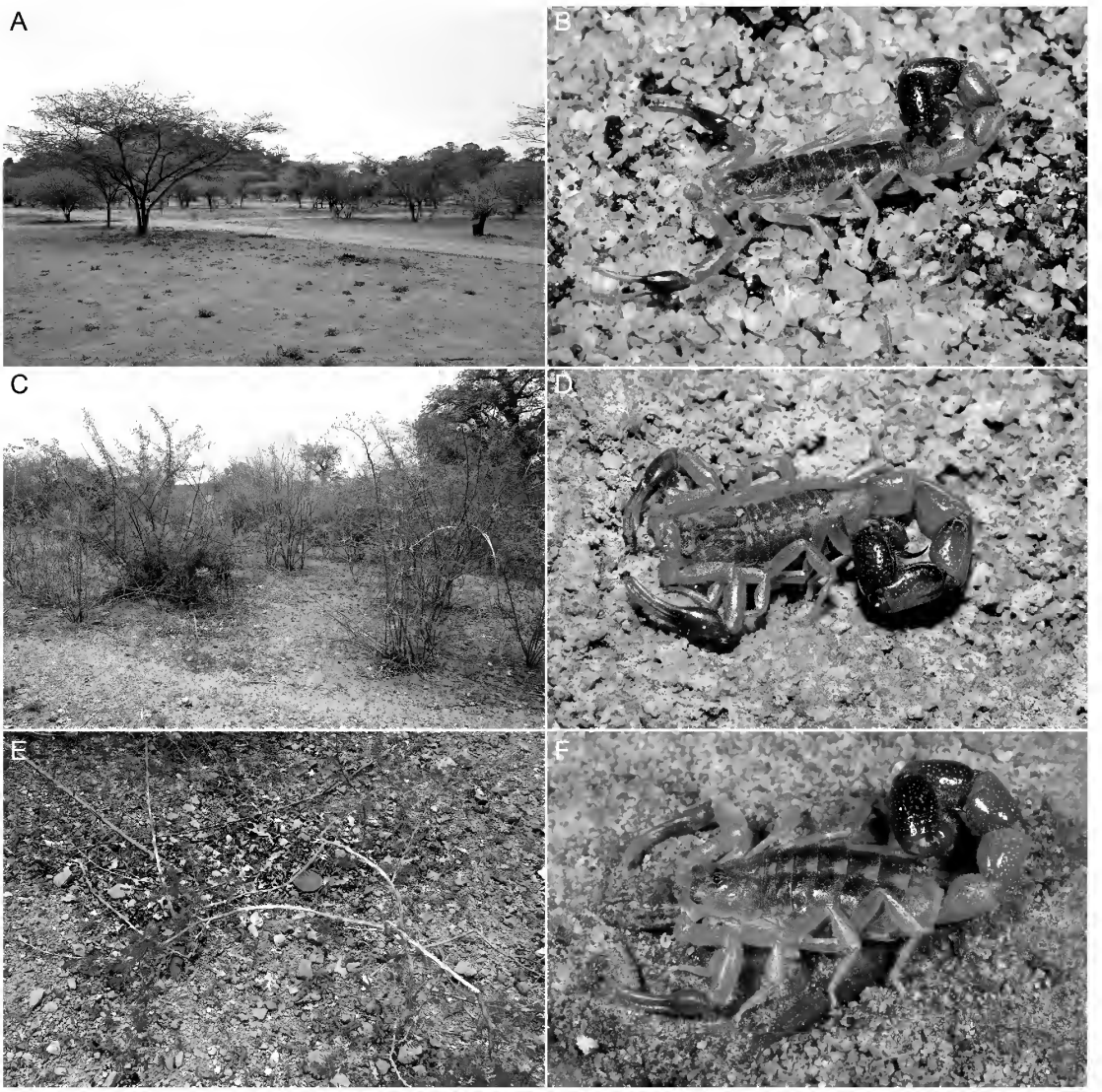

FIGURE 2. Savanna habitat and live habitus of *Uroplectes malawicus*, sp. nov. (**A, B**), and *Uroplectes zambezicus*, sp. nov. (**C–F**). **A.** Monkey Bay, Southern (Blantyre) Region, Malawi. **B.** *U. malawicus*, sp. nov., ♂, Monkey Bay. **C, E.** Tete, Tete Province, Mozambique. **D.** *U. zambezicus*, sp. nov., ♂, Tete. **F.** *U. zambezicus*, sp. nov., ♀, Chiawa, Lusaka Province, Zambia. Photographs courtesy W.R. Schmidt (**A–E**) and W. Conradie (**F**).

Photographs were taken in visible light as well as under long wave UV light using a Microptics™ ML-1000 digital photomicrography system. Measurements (mm), given as average and range in the descriptions, were recorded using the ocular micrometer of a Nikon® SMZ-1500 stereomicroscope. Morphological terminology follows previous papers on Buthidae C.L. Koch, 1837, by the author (e.g., Prendini 2004a, 2004b, 2004c, 2005b; Vignoli and Prendini, 2008; Prendini et al., 2009; Prendini and Esposito, 2010; Tahir et al., 2014), with the terms "external" and "internal" replaced by "retrolateral" and "prolateral" when referring to position on appendages (chelicerae, pedipalps, and legs). Terminology for lateral ocelli follows Loria and Prendini

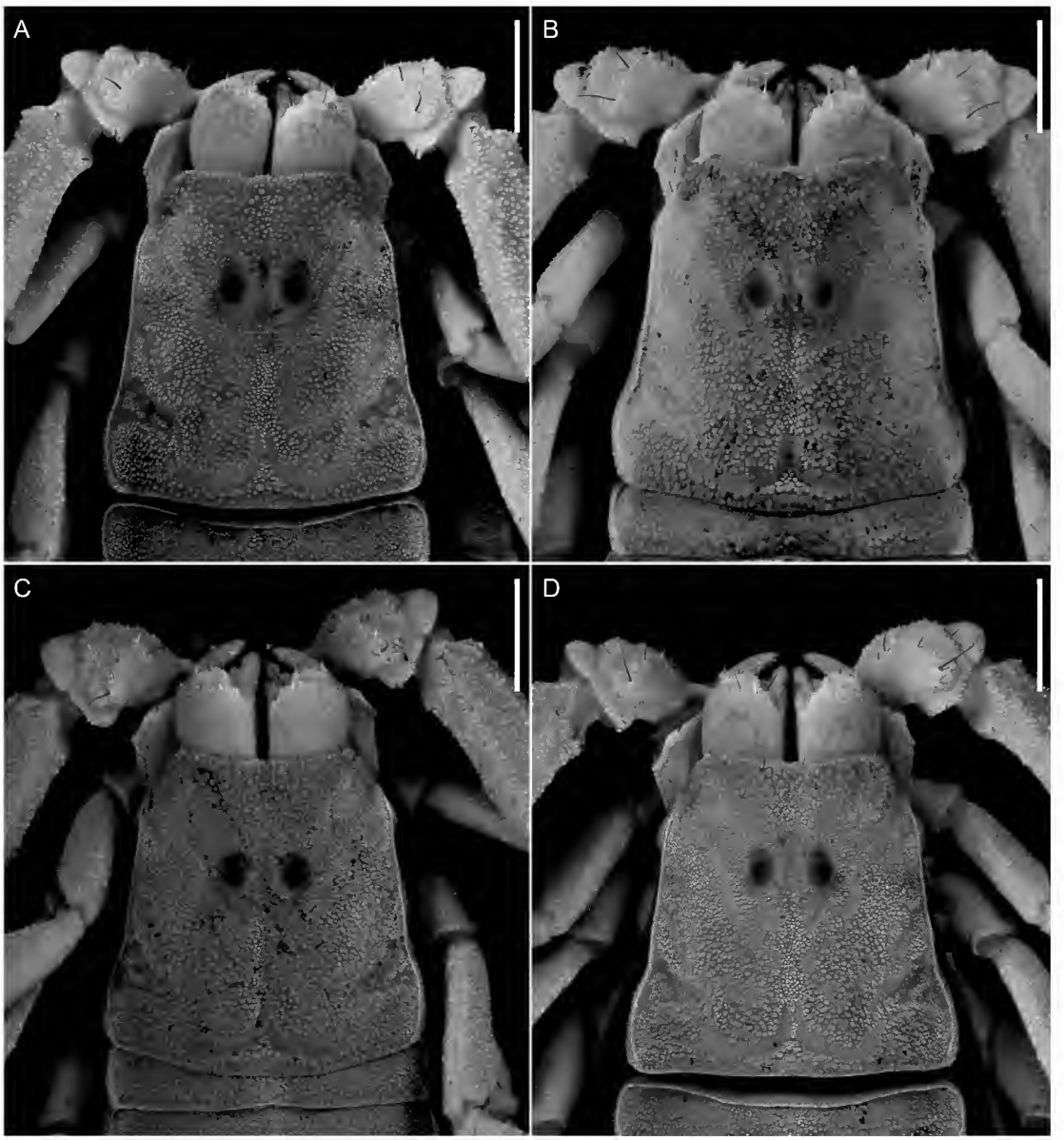

FIGURE 3. Carapace, dorsal aspect of *Uroplectes malawicus*, sp. nov. (**A, B**), and *Uroplectes zambezicus*, sp. nov. (**C, D**). **A.** Paratype ♂ (AMNH), Monkey Bay, Malawi. **B.** Paratype ♀ (AMNH), same locality. **C.** Paratype ♂ (AMNH), Zambezi River, Mozambique. **D.** Paratype ♀ (AMNH), same locality. Scale bars = 1 mm.

(2014). Counts of median denticle subrows on the pedipalp chela movable finger include the short subterminal subrow comprising two denticles.

A point locality geographical dataset of collection records from the material examined was created for mapping the distribution of the new species. Records of sufficient accuracy, for which georeferences were not provided, were retroactively georeferenced using the GEOnet Names Server (http://earth-info.nga.mil/gns/html/namefiles.htm), Fuzzy Gazetteer (http://

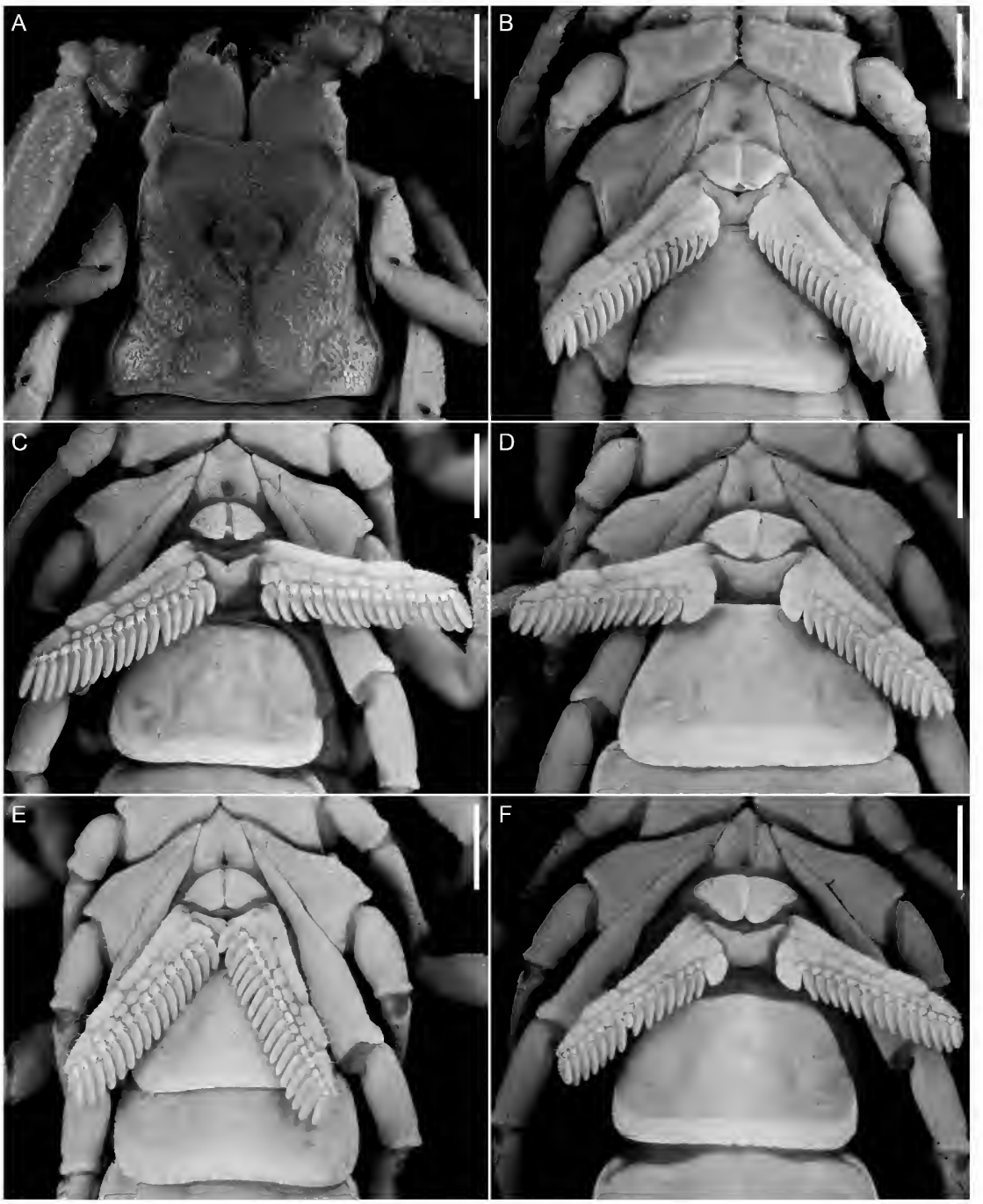

FIGURE 4. Carapace, dorsal aspect (**A**), sternum, genital opercula and pectines, ventral aspect (**B–F**) of *Uroplectes katangensis*, sp. nov. (**A, B**), *Uroplectes malawicus*, sp. nov. (**C, D**), and *Uroplectes zambezicus*, sp. nov. (**E, F**). **A, B.** Holotype ♀ (MRAC 24.290), Mwema, Democratic Republic of Congo. **C.** Paratype ♂ (AMNH), Monkey Bay, Malawi. **D.** Paratype ♀ (AMNH), same locality. **E.** Paratype ♂ (AMNH), Zambezi River, Mozambique. **F.** Paratype ♀ (AMNH), same locality. Scale bars = 1 mm.

isodp.hof-university.de/fuzzyg/query/) and Google Earth. A distribution map was produced using ArcMap, version 10.1 (Environmental Systems Research Institute, Redlands, California), by superimposing point locality records on the GTOPO30 global digital elevation model (https://lta.cr.usgs.gov/GTOPO30), obtained online (http://webmap.ornl.gov/wcsdown/wcsdown.jsp?dg_id=10003_1).

SYSTEMATICS

Family Buthidae C.L. Koch, 1837

Uroplectes malawicus, sp. nov.

Figures 1, 2B, 3A, B, 4C, D, 5, 6, 7A, C, 8A, C, 9A, C; table 1

HOLOTYPE: **MALAWI: Southern (Blantyre) Region:** *Mangochi District*: Monkey Bay, ca. 1 km S on road S128 to Mangochi, 14°06′25″S 34°55′01″E, 485 m, 13.xii.2007, L. Prendini and W.R. Schmidt, mesic savanna (miombo woodland) on flat plain with low granite/dolerite koppies (plains in between), coarse sandy-loam soils, UV light detection on warm and humid, dark (overcast) night after rain, on palm leaf near base of plant, 1 ♂ (AMNH).

PARATYPES: **MALAWI: Southern (Blantyre) Region:** *Mangochi District*: Monkey Bay [14°05′S 34°55′E], 23.xii.1993, C.R. Owen, 2 ♂ (AMNH); Monkey Bay, ca. 1 km S on road S128 to Mangochi, 14°06′25″S 34°55′01″E, 485 m, 13.xii.2007, L. Prendini and W.R. Schmidt, mesic savanna (miombo woodland) on flat plain with low granite/dolerite koppies (plains in between), coarse sandy-loam soils, UV light detection on warm and humid, dark (overcast) night after rain, taken in woodpile (dead, decayed bush) on ground, by sifting manually and scanning with UV, sympatric with *Opistophthalmus glabrifrons* Peters, 1861, *Pandinurus viatoris*, *Uroplectes flavoviridis* Peters, 1861, and *Uroplectes xanthogrammus* Pocock, 1897, 8 ♂, 11 ♀, 1 subad. ♂, 1 subad. ♀ (AMNH), 1 subad. ♂ (AMCC [LP 8228]).

ETYMOLOGY: The specific epithet is derived from Lake Malawi, which is near the known localities of the new species.

DIAGNOSIS: *Uroplectes malawicus*, sp. nov., appears to be most closely related to *U. zambezicus*, sp. nov., based on the lower pectinal tooth count (15–17) and enlarged basal pectinal tooth of the female in both species, by means of which they may be separated from *U. katangensis*, sp. nov., in which the pectinal tooth count is higher (18–19) and the basal pectinal tooth unmodified in the female. *Uroplectes malawicus*, sp. nov., resembles *U. katangensis*, sp. nov., and differs from *U. zambezicus*, sp. nov., in possessing a slightly narrower chela manus and longer, narrower metasoma (more so in the adult male) as well as more uniform coloration. The tergites are almost entirely infuscate in *U. malawicus*, sp. nov., and *U. katangensis*, sp. nov., but exhibit a narrow immaculate stripe medially and sometimes a pair of narrow immaculate stripes laterally in *U. zambezicus*, sp. nov. The dorsal surfaces of the chelicerae, lateral surfaces of the pedipalp patella, and often dorsal and prodorsal surfaces of the pedipalp femur and trochanter, as well as dorsal and retrolateral surfaces of the leg femora, patellae, and tibia are partially infuscate in *U. malawicus*, sp. nov., whereas the chelicerae, pedipalp trochanter, femur,

FIGURE 5. Habitus, dorsal aspect (**A, C**) and ventral aspect (**B, D**) of *Uroplectes malawicus*, sp. nov. **A, B.** Holotype ♂ (AMNH), Monkey Bay, Malawi. **C, D.** Paratype ♀ (AMNH), same locality. Scale bars = 5 mm.

TABLE 1. Meristic data for six males and six females of *Uroplectes malawicus*, sp. nov., in the collections of the American Museum of Natural History, New York (AMNH) and the holotype of *Uroplectes katangensis*, sp. nov. (last column), in the collection of the Museé Royal de l'Afrique Centrale, Tervuren, Belgium (MRAC 24.290). Measurements (mm) follow Prendini (2004a, 2004b, 2004c, 2005b). [1]Sum of carapace, tergites I–VII, metasomal segments I–V, and telson; [2]distance from anterior carapace margin; [3]sum of metasomal segments I–V and telson; [4]distance from base of condyle to tip of fixed finger.

Specimen	sex	♂	♂	♂	♂	♂	♂	♀	♀	♀	♀	♀	♀	♀
	type	Holo.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Holo.
Total length[1]		23.3	28.8	23.6	22.9	24.1	22.5	26.8	28.2	26.1	25.0	26.4	26.5	26.5
Carapace	median ocelli[2]	0.9	1.0	0.9	0.9	1.0	0.9	1.1	1.1	1.1	1.5	1.1	1.1	1.0
	length	2.5	2.9	2.5	2.5	2.6	2.3	2.9	3.2	2.9	2.9	3.0	3.0	2.5
	anterior width	1.3	1.6	1.3	1.3	1.4	1.3	1.7	1.8	1.7	1.6	1.6	1.7	1.8
	posterior width	2.4	2.9	2.5	2.5	2.5	2.4	3.3	3.2	3.2	3.2	3.2	3.1	3.2
Tergite I	length	0.4	0.7	0.5	0.4	0.4	0.4	0.7	0.5	0.5	0.7	0.6	0.6	0.5
Tergite II	length	0.7	0.9	0.7	0.7	0.6	0.6	0.9	1.0	0.9	0.8	0.7	0.8	0.7
Tergite III	length	0.9	1.2	0.9	0.9	0.9	0.9	1.2	1.2	1.0	1.1	1.1	1.0	0.9
Tergite IV	length	1.0	1.4	1.1	1.0	1.1	1.0	1.4	1.3	1.4	1.3	1.3	1.3	1.2
Tergite V	length	1.2	1.5	1.3	1.2	1.2	1.3	1.4	1.7	1.5	0.9	1.5	1.4	1.5
Tergite VI	length	1.2	1.5	1.4	1.2	1.3	1.3	1.4	1.7	1.5	1.0	1.5	1.5	1.5
Tergite VII	length	1.8	2.0	1.8	1.7	1.8	1.7	1.8	2.0	1.9	1.8	1.8	1.8	1.8
Sternite VII	length	1.5	1.8	1.6	1.4	1.5	1.5	1.6	1.5	1.4	1.6	1.4	1.4	1.6
	width	2.3	2.8	2.4	2.3	2.5	2.3	3.1	3.4	3.3	3.2	3.2	3.3	3.4
Mesosoma	total length	7.0	9.1	7.5	7.0	7.2	7.1	8.7	9.4	8.7	7.4	8.3	8.2	8.0
Metasoma I	length	1.9	2.2	1.8	1.8	2.0	1.8	1.9	2.2	1.9	1.9	2.0	2.0	2.0
	width	1.6	1.9	1.6	1.6	1.7	1.6	1.9	2.3	2.0	2.0	2.1	2.1	2.2
	height	1.4	1.5	1.3	1.3	1.4	1.4	1.6	1.7	1.7	1.6	1.6	1.6	1.7
Metasoma II	length	2.2	2.6	2.2	2.1	2.3	2.0	2.4	2.4	2.2	2.3	2.4	2.4	2.4
	width	1.7	1.9	1.7	1.6	1.7	1.6	2.0	2.3	2.1	2.1	2.2	2.2	2.3
	height	1.4	1.7	1.4	1.4	1.6	1.4	1.7	1.8	1.8	1.7	1.7	1.8	2.0
Metasoma III	length	2.3	2.8	2.3	2.3	2.4	2.1	2.5	2.7	2.5	2.4	2.5	2.5	2.6
	width	1.8	2.0	1.8	1.7	1.8	1.7	2.1	2.3	2.2	2.1	2.3	2.3	2.3
	height	1.5	1.8	1.5	1.5	1.6	1.4	1.7	1.8	2.0	1.7	1.8	1.8	2.0

Specimen	sex	♂	♂	♂	♂	♂	♂	♀	♀	♀	♀	♀	♀	♀
	type	Holo.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Holo.
Metasoma IV	length	2.5	3.2	2.5	2.4	2.6	2.4	2.8	2.8	2.8	2.6	2.6	2.8	3.0
	width	1.8	2.1	1.8	1.7	1.8	1.7	2.1	2.3	2.2	2.1	2.3	2.3	2.3
	height	1.5	1.8	1.5	1.5	1.6	1.5	1.7	1.9	2.0	1.7	1.8	1.8	2.0
Metasoma V	length	2.5	3.2	2.6	2.5	2.8	2.5	2.9	3.0	2.8	2.8	2.8	2.8	3.2
	width	1.8	2.2	1.8	1.7	1.9	1.8	2.1	2.4	2.3	2.2	2.3	2.3	2.3
	height	1.5	1.7	1.4	1.5	1.5	1.4	1.7	1.7	1.8	1.7	1.8	1.8	2.0
Metasoma	total length[3]	11.4	14.0	11.3	11.1	11.9	10.7	12.5	13.0	12.1	12.0	12.2	12.5	13.1
Telson	total length	2.5	2.8	2.4	2.4	2.5	2.4	2.8	2.7	2.5	2.7	2.9	2.8	3.0
	vesicle length	1.5	1.8	1.5	1.5	1.6	1.5	1.7	1.9	1.8	1.7	1.8	1.7	1.9
	vesicle width	1.1	1.4	1.1	1.2	1.3	1.2	1.4	1.5	1.5	1.4	1.5	1.5	1.5
	vesicle height	1.0	1.1	0.9	0.9	1.0	1.0	1.1	1.2	1.1	1.2	1.1	1.1	1.2
	aculeus length	1.0	1.0	0.9	1.0	0.9	0.9	1.1	0.8	0.7	1.1	1.1	1.1	1.1
Femur	length	2.3	2.6	2.3	2.2	2.3	2.1	2.5	2.6	2.5	2.3	2.5	2.6	2.6
	width	0.8	0.8	0.7	0.7	0.7	0.7	0.8	0.9	0.8	0.8	0.8	0.9	0.9
	height	0.6	0.8	0.6	0.6	0.6	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.8
Patella	length	2.5	2.9	2.5	2.5	2.6	2.4	2.9	3.1	2.9	2.7	2.8	2.9	3.1
	width	0.9	1.1	0.9	0.9	1.0	0.9	1.1	1.2	1.2	1.0	1.2	1.1	1.2
	height	0.7	0.9	0.7	0.7	0.7	0.7	0.8	1.0	0.9	0.8	0.9	0.9	1.0
Chela	length[4]	4.3	4.9	4.0	4.0	4.3	4.1	4.9	4.9	4.7	4.4	5.0	5.0	5.3
	width	1.0	1.2	0.9	0.9	1.0	0.9	1.0	1.2	1.1	1.0	1.2	1.1	1.2
	height	1.0	1.2	0.9	0.9	1.0	0.9	1.0	1.1	1.1	1.0	1.1	1.0	1.0
	length retrovent. carina	1.8	2.0	1.7	1.6	1.7	1.7	1.7	1.8	1.8	1.6	1.8	1.9	1.8
	length movable finger	2.5	2.9	2.5	2.6	2.8	2.6	3.2	3.2	3.1	3.1	3.2	2.7	3.5
	subrows fixed finger	11/11	11/11	11/11	12/12	11/11	11/11	11/11	11/11	11/11	12/12	11/11	11/11	13/13
	subrows mov. finger	12/12	12/12	12/12	12/12	12/12	12/12	12/12	12/12	12/12	13/12	12/12	12/12	13/13
Pectines	total length	2.0	2.3	2.1	2.1	2.1	2.1	2.1	2.1	2.3	2.2	2.3	2.3	2.5
	length dentate margin	2.1	2.3	2.1	2.1	2.2	2.1	2.2	2.3	2.3	2.3	2.3	2.2	2.6
	tooth count (left/right)	17/17	17/17	16/16	17/17	17/17	16/16	16/15	16/16	16/17	16/16	15/15	16/15	19/18

patella, and legs are entirely immaculate in *U. zambezicus*, sp. nov. Metasomal segment IV is often darker in *U. malawicus*, sp. nov., than in *U. zambezicus*, sp. nov. *Uroplectes malawicus*, sp. nov., differs further from *U. katangensis*, sp. nov., in the lower counts of median denticle subrows on the fixed and movable fingers of the pedipalp chela (11 or 12 vs. 13, respectively), and from *U. zambezicus*, sp. nov., in the more numerous and pronounced spiniform granules in the distal half of the chela manus prodorsal surface in the adult male.

Description: The following account is based on the type material.

Total length: Adult: small, maximum length, measured from anterior margin of carapace to tip of aculeus, 24 mm (22–29 mm, $n = 6$) (♂), 26 mm (25–28 mm, $n = 6$) (♀) (table 1).

Color: Bicolored (figs. 2B, 5); carapace, tergites I–VI and pedipalp chela manus mostly infuscate, dark blackish brown and contrasting with immaculate, pale yellow or orange to reddish-orange chelicerae, legs, and pedipalp trochanter, femur, patella, and chela fingers. Tergite VII and, in some specimens, dorsal surfaces of cheliceral manus and pedipalp femur, lateral surfaces of pedipalp patella, and often dorsal and prodorsal surfaces of pedipalp femur and trochanter, as well as dorsal and retrolateral surfaces of leg femora, patellae, and tibia and/or ventral surfaces of metasomal segments IV and V, partially infuscate. Metasomal segments, base coloration progressively darkening posteriorly, with segment IV, and to a greater extent, segment V and telson, darker than preceding segments.

Chelicerae: Movable finger, ventral surface with two subdistal teeth; distal external (dorsal) and distal internal (ventral) teeth subequal, opposable. Fixed finger, ventral surface without denticles. Fingers and manus, proventral surfaces, with long, dense vestiture of macrosetae.

Carapace: Anterior width of posterior width, 53% (51%–56%, $n = 6$) (♂), 52% (49%–56%, $n = 6$) (♀); posterior width of length, 99% (98%–102%, $n = 6$) (♂), 107% (100%–116%, $n = 6$) (♀) (table 1). Anterior and posterior carapace margins procurved (fig. 3A, B); anterior margin with median projection (epistome) and without median notch. Five pairs of lateral ocelli; each lateral ocular tubercle with three major ocelli, similar in size, situated anterolaterally, and two minor ocelli, situated posterodorsal and dorsal to posterolateral major ocellus (Type 5 pattern). Median ocelli considerably larger than lateral ocelli, distance between ocelli less than width of ocellus. Median ocular tubercle situated anteromedially, distance from anterior carapace margin 36% (34%–38%, $n = 6$) (♂), 38% (35%–50%, $n = 6$) (♀) of carapace length (table 1). Superciliary carinae obsolete, granular, not protruding above median ocelli. Other carinae absent. Anteromedian sulcus shallow, ovate; posteromedian sulcus narrow, shallow anteriorly, deep posteriorly; posterolateral sulci shallow, wide, curved; posteromarginal sulcus deep, narrow. Carapace surfaces entirely and finely granular, except in sulci, which are smooth.

Pedipalps: Femur width of length, 31% (29%–33%, $n = 6$) (♂), 33% (32%–35%, $n = 6$) (♀) (table 1). Prodorsal, promedian, proventral, retrodorsal, and retromedian carinae obsolete, granular, complete (fig. 6A). Promedian carina additionally with scattered subspiniform granules. Other carinae absent. All intercarinal surfaces finely and densely granular, slightly less so ventrally. Patella width of length, 36% (34%–37%, $n = 6$) (♂), 39% (37%–42%, $n = 6$) (♀) (table 1). Promedian and proventral carinae obsolete, comprising discontinuous rows of spiniform granules, and demarcated with prominent macrosetae, proximally (fig. 6B–D).

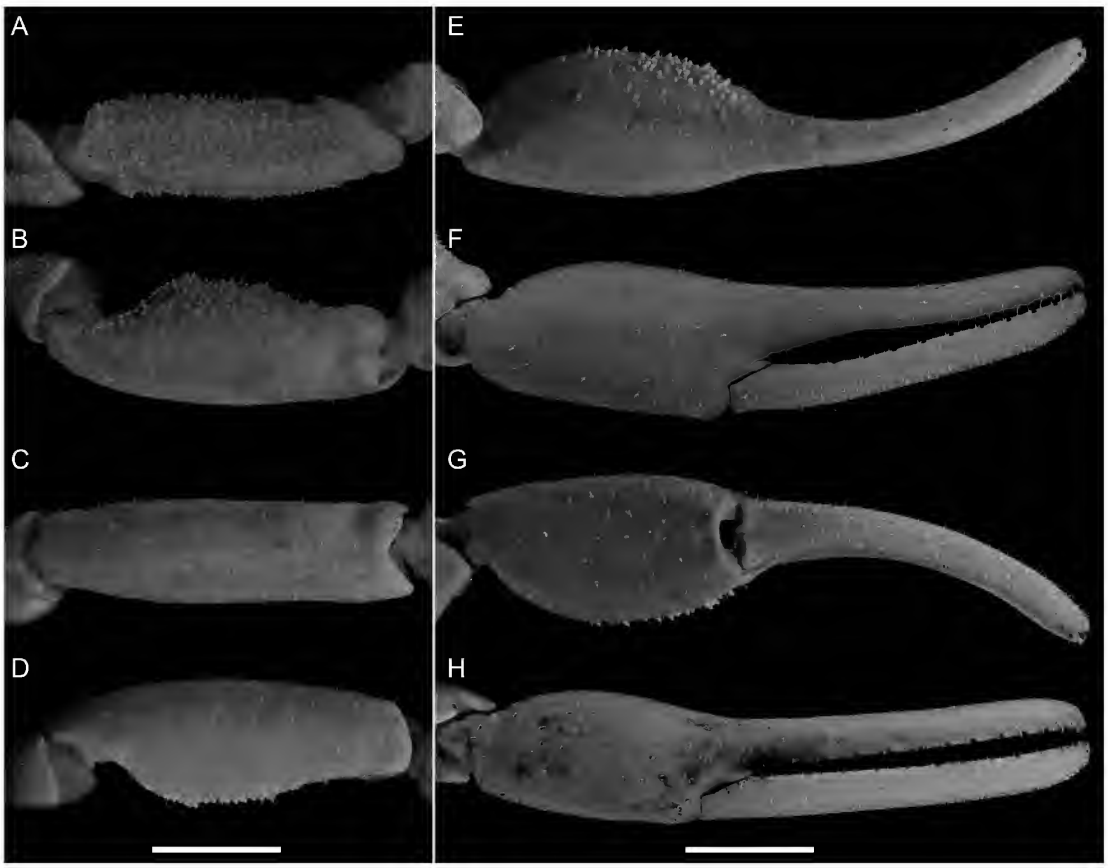

FIGURE 6. Dextral pedipalp segments of *Uroplectes malawicus*, sp. nov., paratype ♂ (AMNH), Monkey Bay, Malawi (**A–G**) and paratype ♀ (AMNH), same locality. (**H**). **A.** Femur, dorsal aspect. **B–D.** Patella, dorsal (**B**), retrolateral (**C**) and ventral (**D**) aspects. **E–H.** Chela, dorsal (**E**), retrolateral (**F, H**) and ventral (**G**) aspects. Scale bars = 1 mm.

Other carinae absent. Prolateral intercarinal surfaces finely and densely granular. Chela manus slightly incrassate (♂, fig. 6E–G) or slender (♀, fig. 6H); width of height, 101% (100%–104%, *n* = 6) (♂), 105% (100%–110%, *n* = 6) (♀); width of length along ventroexternal carina, 57% (53%–60%, *n* = 6) (♂), 62% (59%–64%, *n* = 6) (♀); length along ventroexternal carina of length movable finger, 66% (61%–70%, *n* = 6) (♂), 57% (52%–70%, *n* = 6) (♀) (table 1). Manus almost asetose, except prodorsal surface with scattered macrosetae, becoming more numerous distally (♂); surfaces smooth except prodorsal surface with scattered spiniform granules, more numerous and pronounced in distal half (♂) (fig. 6E–H), smooth or with few small scattered spiniform granules (♀). Movable finger sublinear. Fixed finger slightly curved dorsally in proximal half, creating shallow gap with movable finger, proximally, when fingers closed (♂, fig. 6F) or sublinear, such that little or no gap present between fingers proximally, when closed (♀, fig. 6H). Fixed and movable fingers, surfaces smooth; median denticle rows respectively comprising 11 (11–12, *n* = 12) and 12 (12–13, *n* = 12) oblique denticle subrows, each subrow terminating in large median denticle proximally,

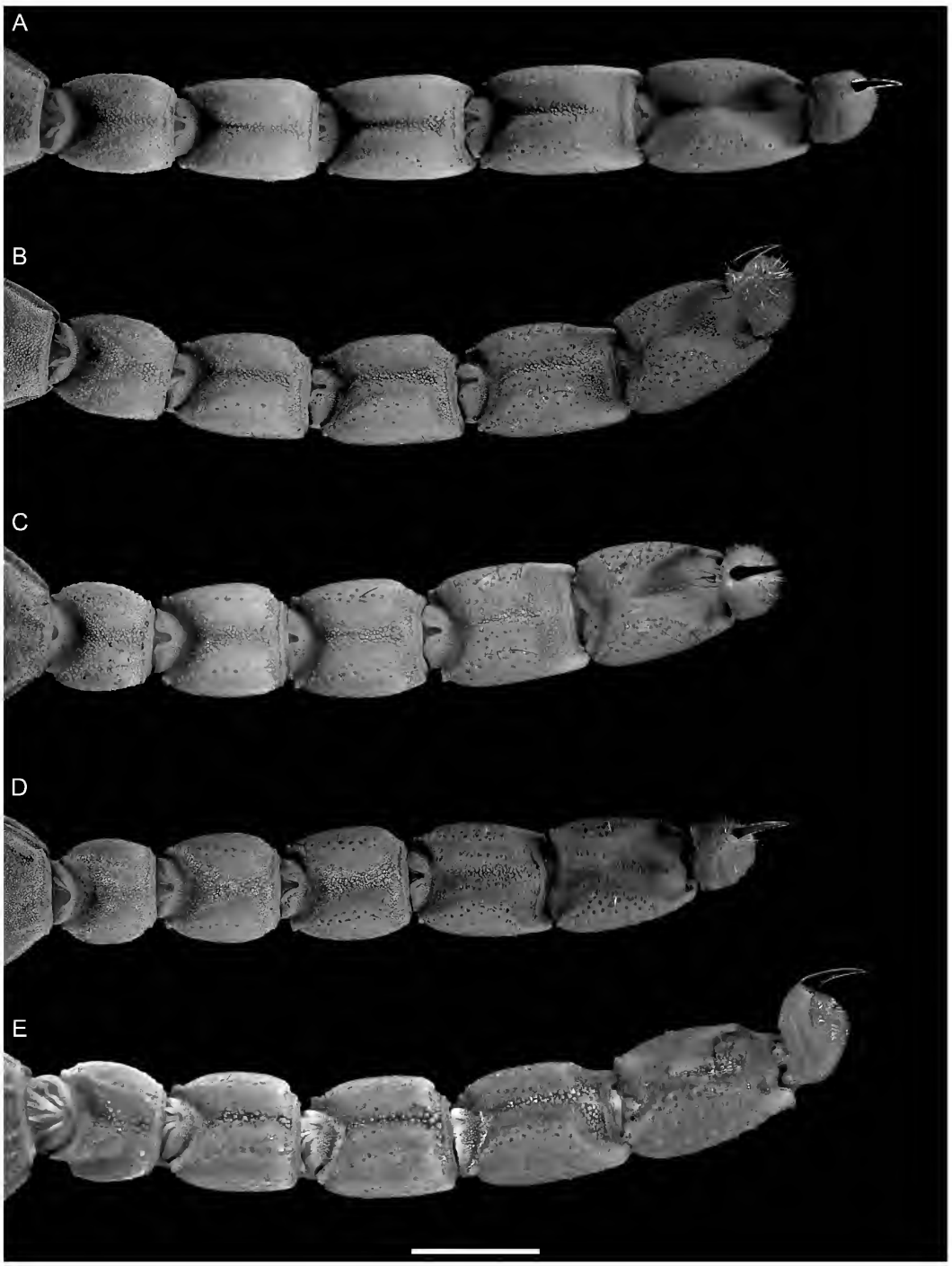

FIGURE 7. Metasoma and telson, dorsal aspects of *Uroplectes malawicus*, sp. nov., Monkey Bay, Malawi (**A, C**), *Uroplectes zambezicus*, sp. nov., Zambezi River, Mozambique (**B, D**), and *Uroplectes katangensis*, sp. nov., Mwema, Democratic Republic of Congo (**E**). **A, B.** Paratype ♂ (AMNH). **C, D.** Paratype ♀ (AMNH). **E.** Holotype ♀ (MRAC 24.290).Scale bar = 2.5 mm.

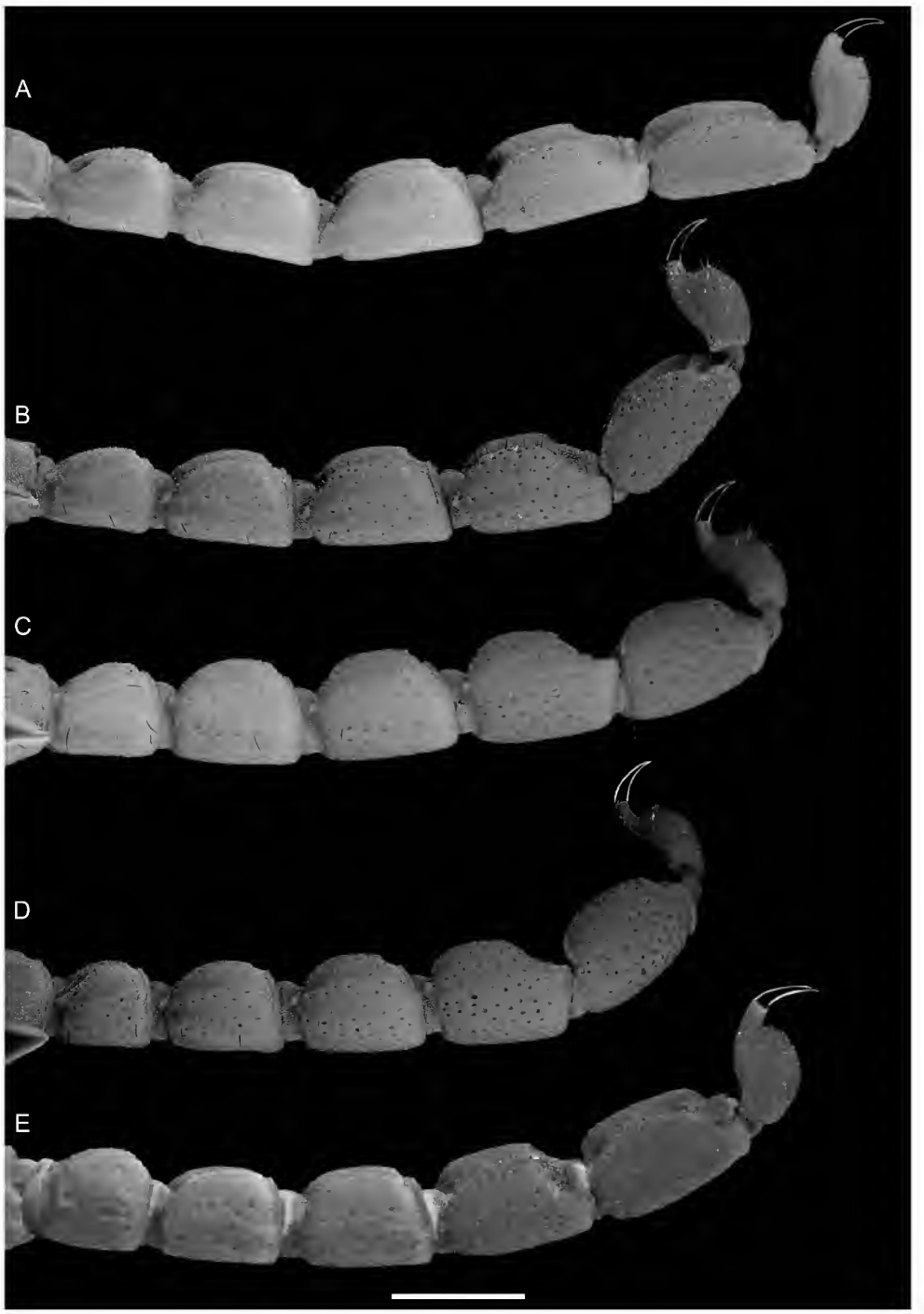

FIGURE 8. Metasoma and telson, lateral aspects of *Uroplectes malawicus*, sp. nov., Monkey Bay, Malawi (**A, C**), *Uroplectes zambezicus*, sp. nov., Zambezi River, Mozambique (**B, D**), and *Uroplectes katangensis*, sp. nov., Mwema, Democratic Republic of Congo (**E**). **A, B.** Paratype ♂ (AMNH). C, D. Paratype ♀ (AMNH). E. Holotype ♀ (MRAC 24.290). Scale bar = 2.5 mm.

FIGURE 9. Metasoma and telson, ventral aspects of *Uroplectes malawicus*, sp. nov., Monkey Bay, Malawi (**A, C**), *Uroplectes zambezicus,* sp. nov., Zambezi River, Mozambique (**B, D**), and *Uroplectes katangensis*, sp. nov., Mwema, Democratic Republic of Congo (**E**). **A, B.** Paratype ♂ (AMNH). C, D. Paratype ♀ (AMNH). E. Holotype ♀ (MRAC 24.290). Scale bar = 2.5 mm.

and flanked proximally by large retrolateral denticle, and distally by larger prolateral denticle, prolateral denticles separated from median subrows by approximately one denticle width; fingers each with enlarged terminal denticle.

Trichobothria: Orthobothriotaxic, Type A, α configuration (fig. 6) with the following segment totals: 11 femur: 5 dorsal (d_1–d_5), 4 internal (i_1–i_4), 2 external (e_1, e_2); 13 patella: 5 dorsal d_1–d_5, 1 internal (*i*), 7 external (*et*, *est*, *em*, esb_1, esb_2, eb_1, eb_2); 8 chela manus: 2 ventral (V_1, V_2), 6 external (Eb_1–Eb_3, *Esb*, *Est*, *Et*); 7 chela fixed finger: *dt*, *db*, *it*, *et*, *est*, *esb*, *eb*. The following trichobothria are noticeably smaller ("petite"): femur: d_2, d_3, d_4, i_4, e_2; patella: d_2, eb_2; chela manus: V_1, *Et*, Eb_3, *Esb*; chela fixed finger: *esb*.

Legs: Femora I–IV, each with four obsolete granular carinae and retrolateral surfaces finely and densely granular. Patellae I–IV each with five obsolete granular carinae and retrolateral surfaces finely and densely granular. Other segments acarinate, smooth. Tibiae I–IV, retrolateral and ventral surfaces with scattered macrosetae; III and IV with spurs. Basitarsi I–IV, each with pro- and retroventral rows of fine, acuminate macrosetae; macrosetal combs absent; pro- and retrolateral pedal spurs present. Telotarsi I–IV, each with pro- and retroventral rows of fine, acuminate macrosetae; laterodistal lobes truncated; median dorsal lobes extending to ungues; ungues short, distinctly curved, equal in length.

Sternum: Subtriangular (fig. 4C, D). Median longitudinal furrow Y-shaped, shallow anteriorly, becoming deeper posteriorly.

Genital operculum: Genital opercula suboval, completely divided longitudinally; genital papillae present (♂, fig. 4C), absent (♀, fig. 4D).

Hemispermatophore: Flagelliform.

Pectines: Distal edge reaching past distal edge of coxa IV but not reaching to distal edge of trochanter IV (♂, fig. 4C) or to distal edge of coxa IV (♀, fig. 4D). Three marginal lamellae and five (♂) or three (♀) median lamellae; first proximal median lamella (scape) of each pecten unmodified, mesial margin angular, approximately 90°, teeth present along entire posterior margin. Fulcra present. Pectinal teeth curved, all similar in size (♂) or basal pectinal tooth enlarged, approximately twice the size of other teeth (♀); tooth count, 17/17 (16–17/16–17, n = 12) (♂), 16/15 (15–16/15–17, n = 12) (♀) (table 1).

Mesosoma: Tergites I–VI unicarinate, each bearing obsolete costate to costate-granular median carinae in posterior half to two-thirds of segment, and pair of submedian depressions. Tergite VII pentacarinate, with obsolete costate median carina, restricted to anterior half of segment, distinct costate-granular submedian carinae in posterior three-quarters, and obsolete granular lateral carinae in posterior two-thirds. Pretergites smooth, with fine granulation along posterior margins. Posttergites, intercarinal surfaces entirely and finely granular, becoming more coarsely granular posteriorly. Sternites III–VII, acarinate, smooth, except for sternite VII, which is finely and sparsely granular posterolaterally; IV–VI, each with paired longitudinal depressions prolateral to spiracles, absent on VII. Sternite VII, length of width, 63% (59%–67%, n = 6) (♂), 46% (42%–52%, n = 6) (♀) (table 1).

Metasoma and telson: Metasomal segments I–V progressively increasing in length and width (fig. 5); segment V, width of segment I, width, 111% (109%–113%, n = 6) (♂), 109% (104%–113%, n = 6) (♀) (table 1). Metasoma relatively slender in ♂, robust, especially poste-

riorly, in ♀; width of length, segment I, 87% (84%–91%, *n* = 6) (♂), 104% (100%–105%, *n* = 6) (♀); II, 76% (73%–80%, *n* = 6) (♂), 91% (85%–98%, *n* = 6) (♀); III, 75% (71%–79%, *n* = 6) (♂), 87% (82%–90%, *n* = 6) (♀); IV, 69% (65%–71%, *n* = 6) (♂), 81% (75%–87%, *n* = 6) (♀); V, 69% (67%–72%, *n* = 6) (♂), 79% (71%–84%, *n* = 6) (♀). Telson vesicle, width of metasomal segment V, 65% (61%–68%, *n* = 6) (♂), 65% (64%–65%, *n* = 6) (♀); globose, height of length, 63% (60%–67%, *n* = 6) (♂), 65% (63%–70%, *n* = 6) (♀); dorsal surface slightly curved, concave basally, ventral surface markedly curved. Aculeus relatively short and abruptly curved, length of vesicle length, 60% (56%–66%, *n* = 6) (♂), 57% (40%–67%, *n* = 6) (♀). Length metasoma and telson, of total length, 59% (58%–60%, *n* = 6) (♂), 57% (55%–59%, *n* = 6) (♀). Dorsosubmedian carinae, segments I–V, obsolete, granular, incomplete, restricted to few granules in anterior third to anterior half of segment (fig. 7A, C). Dorsolateral carinae, segments I–V, distinct, granular to costate-granular, vestigial, restricted to anterior third of segment (fig. 8A, C); all other carinae absent. Segment I, dorsolateral intercarinal surfaces finely and densely granular; segments I–V, dorsomedian intercarinal surfaces, coarsely and densely shagreened; all other metasomal surfaces smooth. Segments I–V, lateral and ventral surfaces markedly punctate, becoming more so on posterior segments (figs. 7A, C, 8A, C, 9A, C). Metasomal segments sparsely setose, segments IV and V more setose than preceding segments, especially on dorsosubmedian and dorsolateral carinae. Telson vesicle acarinate, with small, blunt subaculear tubercle ventrally; dorsal, lateral, and ventral surfaces smooth or nearly so; lateral and ventral surfaces markedly punctate; ventral surfaces moderately setose, becoming more so distally at base of aculeus and around subaculear tubercle.

Distribution: Presently known from only two nearby localities on Cape Maclear, south of Lake Malawi, in Malawi (fig. 1).

Ecology: Most of the known material was collected in mesic savanna (miombo woodland) on flat, sparsely vegetated plains of coarse sandy-loam soil, between low granite/dolerite hills at an elevation of 485 m (fig. 2A). All specimens were found by UV light detection on a warm, moonless (overcast), humid night after rain. One specimen was found on a palm leaf near the base of the plant. The rest were taken in a woodpile (a dead, decayed acacia bush) on the ground, by sifting through the pile manually and scanning with UV. The habitat and habitus (figs. 2B, 5) of *U. malawicus*, sp. nov., are consistent with the lapidicolous and corticolous ecomorphotypes (Prendini, 2001). Two buthids, *Uroplectes flavoviridis* and *U. xanthogrammus*, and two scorpionids, *Opistophthalmus glabrifrons* and *Pandinurus viatoris*, were collected in sympatry.

Uroplectes katangensis, sp. nov.

Figures 1, 4A, B, 7E, 8E, 9E, 10, 11; table 1

Holotype: **DEMOCRATIC REPUBLIC OF CONGO: Katanga Province:** *Haut-Lomami District*: Mwema [08°13′S 27°28′E], vii.1927, A. Bayet, 1 ♀ (MRAC 24.290).

Etymology: The specific epithet is derived from Katanga Province of the Democratic Republic of Congo, where the type locality of the new species is situated.

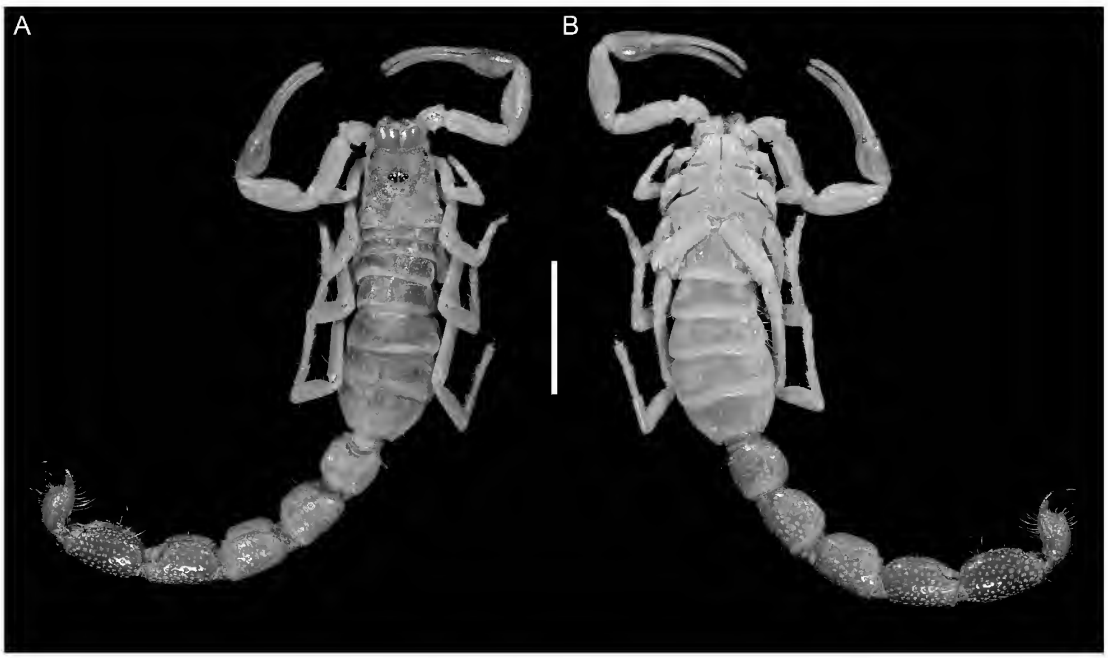

FIGURE 10. Habitus, dorsal aspect (**A**) and ventral aspect (**B**) of *Uroplectes katangensis*, sp. nov., holotype ♀ (MRAC 24.290), Mwema, Democratic Republic of Congo. Scale bar = 5 mm.

DIAGNOSIS: *Uroplectes katangensis*, sp. nov., may be separated from *U. malawicus*, sp. nov., and *U. zambezicus*, sp. nov., on the basis of differences in pectinal structure. The pectinal tooth count is higher (18–19) and the basal pectinal tooth unmodified in the female of *U. katangensis*, sp. nov., compared to *U. malawicus*, sp. nov., and *U. zambezicus*, sp. nov., in which the pectinal tooth count is lower (15–17) and the basal pectinal tooth enlarged in the female. *Uroplectes katangensis*, sp. nov., resembles *U. malawicus*, sp. nov., and differs from *U. zambezicus*, sp. nov., in possessing a slightly narrower chela manus and a longer, narrower metasoma as well as more uniform coloration. The tergites are almost entirely infuscate in *U. katangensis*, sp. nov., and *U. malawicus*, sp. nov., but exhibit a narrow immaculate stripe medially and sometimes a pair of narrow immaculate stripes laterally in *U. zambezicus*, sp. nov. *Uroplectes katangensis*, sp. nov., differs further from *U. malawicus*, sp. nov., and *U. zambezicus*, sp. nov., in the higher counts of median denticle subrows on the fixed and movable fingers of the pedipalp chela (13 vs. 11 or 12, respectively).

DESCRIPTION: The following account, which is based on the holotype, describes only those characters that differ from the female of *U. malawicus*, sp. nov. The male is unknown.

Total length: Adult: small, maximum length, measured from anterior margin of carapace to tip of aculeus, 26 mm (table 1).

Color: Faded but generally similar to *U. malawicus*, sp. nov. (fig. 10).

Carapace: As for *U. malawicus*, sp. nov., except as follows (fig. 4A). Anterior width of posterior width, 53%; posterior width of length, 99% (table 1). Median ocular tubercle, distance from anterior carapace margin 35% of carapace length.

FIGURE 11. Dextral pedipalp segments of *Uroplectes katangensis*, sp. nov., holotype ♀ (MRAC 24.290), Mwema, Democratic Republic of Congo. **A.** Femur, dorsal aspect. **B–D.** Patella, dorsal (**B**), retrolateral (**C**) and ventral (**D**) aspects. **E–H.** Chela, dorsal (**E**), retrodorsal (**F**), retrolateral (**G**) and ventral (**H**) aspects. Scale bars = 1 mm.

Pedipalps: As for *U. malawicus*, sp. nov., except as follows (fig. 11). Femur width of length, 35% (table 1). Patella width of length, 37%. Chela manus width of height, 121%; width of length along ventroexternal carina, 64%; length along ventroexternal carina of length movable finger, 51%. Fixed and movable fingers, median denticle rows each comprising 13 (n = 4) oblique denticle subrows.

Hemispermatophore: Unknown.

Pectines: As for *U. malawicus*, sp. nov., except as follows (fig. 4B). Pectinal teeth curved, all similar in size, basal pectinal tooth unmodified; tooth count, 19/18 (table 1).

Mesosoma: As for *U. malawicus*, sp. nov., except as follows. Sternite VII, length of width, 48% (table 1).

Metasoma and telson: As for *U. malawicus*, sp. nov., except as follows (figs. 7E, 8E, 9E). Metasomal segment V, width of segment I, width, 102% (table 1). Metasoma width of length, segment I, 110%; II, 96%; III, 90%; IV, 76%; V, 70%. Telson vesicle, width of metasomal segment V, 67%; globose, height of length, 62%. Aculeus length of vesicle length, 59%. Length metasoma and telson, of total length, 60%.

Distribution: Known only from the type locality in Katanga Province, southeastern Democratic Republic of Congo (fig. 1).

Ecology: The habitus of *U. katangensis*, sp. nov. (fig. 10) is consistent with the lapidicolous and corticolous ecomorphotypes (Prendini, 2001). Based on material in the collections of the MRAC, two buthids, *Hottentotta* cf. *minax* and *Lychas asper*, and a scorpionid, *Pandinurus viatoris*, were sympatric at the type locality.

Uroplectes zambezicus, sp. nov.
Figures 1, 2D, F, 3C, D, 4E, F, 7B, D, 8B, D, 9B, D, 12, 13; table 2

Uroplectes chubbi Hirst, 1911: FitzPatrick, 1996: 64; FitzPatrick, 2001: 191 [misidentification: NHMZ S84/89, S85/17, S86/5, S86/71, S90/17, S95/129].

Holotype: **MOZAMBIQUE: Tete Province:** *Tete District*: Zambezi River, N side, 2.4 km towards Chiuta on road EN222 from junction with road EN103 (Tete–Zòbué), 16°06′50″S 33°37′01″E, 150 m, 10.xii.2007, L. Prendini and W.R. Schmidt, arid mopane savanna on alluvial silty-loam soil with scattered shale and sandstone outcrops, taken under small stone during day, 1 ♂ (AMNH).

Paratypes: **MOZAMBIQUE: Tete Province:** *Moatize District*: Tenge Hill, 15°43.424′S 33°46.313′E, 361 m, 22–24.iii.2013, P.G. Hawkes and J.N. Fisher, 2 ♀ (AMNH), 6.ix.2013, P.G. Hawkes and J.N. Fisher, day collecting, 11 ♂, 1 ♀ (AMNH), night collecting with UV, 18:30–20:30, 1 ♂ (AMNH), 7.ix.2013, P.G. Hawkes and J.N. Fisher, day collecting, 1 ♂, 2 ♀ (AMNH); 15°44.900′S 33°46.159′E, 237 m, 7.ix.2013, P.G. Hawkes and J.N. Fisher, mopane woodland, night collecting with UV, 19:00, 1 ♀ (AMNH). *Tete District*: Zambezi River, N side, 2.4 km towards Chiuta on road EN222 from junction with road EN103 (Tete–Zòbué), 16°06′50″S 33°37′01″E, 150 m, 10.xii.2007, L. Prendini and W.R. Schmidt, arid mopane savanna on alluvial silty-loam soil with scattered shale and sandstone outcrops, collected with UV detection on warm and humid, still, dark night, running or walking on surface, mainly in leaf-litter around base of bushes and in rocky areas, syntopic with *Hottentotta trilineatus* (Peters, 1861), 11 ♂, 7 ♀ (AMNH), 3 first instars (AMCC [LP 8230]); Tete, base of hill with communications tower overlooking town (at bend in road), 16°12′58.9″S 33°34′27.7″E, 189 m, 10.xii.2007, L. Prendini and W.R. Schmidt, arid savanna with baobabs on alluvial silty-loam soil, fairly dense vegetation cover, UV light detection on warm and humid, dark night, running on ground surface, especially in leaf-litter under tree canopy, syntopic with *H. trilineatus* and *Uroplectes planimanus* (Karsch, 1879), 4 ♂, 3 ♀ (AMNH), 1 ♂ (AMCC [LP 8229]); Tete, midslope on hill with communications tower overlooking town, 16°12′55″S 33°34′12″E, 245 m, 10.xii.2007, L. Prendini and W.R. Schmidt, arid savanna with baobabs, UV detection on warm and humid, dark night, on rocky slopes along road, sympatric with *Hadogenes troglodytes* (Peters, 1861), *H. trilineatus* and *U. planimanus*, 1 ♂ (AMNH). **ZAMBIA: Lusaka Province:** Chiawa, junction of Kafue and Zambezi rivers, 15°53.011′S 28°53.942′E, 442 m, 21.iv.2015, W. Conradie, mopane woodland, caught in reptile trap (bucket pitfalls), 1 ♂, 1 ♀ (AMNH), 1 ♂ (AM). **ZIMBABWE: Mashonaland Central Province:** *Guruve District*: Guruve, 4 km NE Gonono School [16°05′S 30°50′E], 28.iii.1997, F. Nyathi, under log, 1 ♀ (NHMZ S97/21), 31.iii.1997, F. Nyathi, pitfall traps, 1 ♂

FIGURE 12. Habitus, dorsal aspect (**A, C**) and ventral aspect (**B, D**) of *Uroplectes zambezicus*, sp. nov. **A, B.** Holotype ♂ (AMNH), Zambezi River, Mozambique. **C, D.** Paratype ♀ (AMNH), same locality. Scale bars = 5 mm.

(NHMZ S97/2); Guruve, 7 km E Mushumbi Pools [16°06′S 30°32′E], 22.iii.1997, F. Nyathi, under mopane bark, 3 ♀ (NHMZ S97/11). **Mashonaland West Province:** *Hurungwe District*: Hurungwe Safari Area: Rifa Conservation Camp [16°10′S 28°50′E], 4–9.xii.1995, Girls' College and NHMZ, pitfall traps, 10 ♂, 4 ♀, 1 subad. ♀, 1 juv. ♂, 2 first instars (NHMZ S96/9). Mana Pools National Park: Nyakasikana Fly Gate, Mana Pools [16°03′S 29°24′E], 9.xii.1984, Falcon College Expedition, 1 ♀ (NHMZ S86/5). *Kariba District*: Matusadona National Park: Chin-

gachereyari, Matusadona, 16°44′S 28°40′E, 13.viii.1983, Zimbabwe Schools Expedition Society, 1 subad. ♂ (NHMZ S83/141); Mbizi Pan, Matusadona [16°49′S 28°28′E], 12.xii.1983, G. Putterill, 1 ♂ (NHMZ S84/89). **Matabeleland North Province:** *Hwange District*: Chisuma area [18°01′S 25°57′E], 31.vii.1990, F. Nyathi, 2 ♂, 1 subad. ♂, 2 subad. ♀ (NHMZ S90/17); Dete [18°38′S 26°52′E], 6.ii.1985, D. Adams, 1 ♀ (NHMZ S85/17); Mzola Camp [18°30′S 27°24′E], 4.xii.1997, Girls' College and NHMZ, 1 ♀ (NHMZ S13/4 ex S99/20); Mzola Camp, 2 km N Homestead [18°30′S 27°24′E], 11.xii.1997, Girls' College and NHMZ, under bark, 2 ♀ (NHMZ S99/16, S99/17). Hwange National Park: Robin's Camp [18°38′S 25°59′E], 1.ii.1986, N. English, 1 ♀ (NHMZ S86/71); Wankie [Hwange], 18°22′S 26°29′E, v.1961, D.G. Broadley, 1 ♀ (NMSA 8319). Matetsi Safari Area: Kasetsheti Weirs, Matetsi [18°18′S 25°48′E], 11.x.1988, F. Nyathi, 1 ♂ (NHMZ S89/3); Rosslyn Camp, Matetsi, Tshowe River [18°30′S 25°55′E], 5–10.xii.1994, Girls' College and NHMZ, 1 ♀ (NHMZ S95/129).

Etymology: The specific epithet is derived from the Zambezi River Valley, where all the known localities of the new species are located.

Diagnosis: *Uroplectes zambezicus*, sp. nov., appears to be most closely related to *U. malawicus*, sp. nov., based on the lower pectinal tooth count (15–17) and enlarged basal pectinal tooth of the female in both species, by means of which they may be separated from *U. katangensis*, sp. nov., in which the pectinal tooth count is higher (18–19) and the basal pectinal tooth unmodified in the female. *Uroplectes zambezicus*, sp. nov., differs from *U. malawicus*, sp. nov., and *U. katangensis*, sp. nov., in possessing a slightly broader chela manus and a shorter, broader metasoma (more so in the adult male) as well as less uniform coloration. The tergites exhibit a narrow immaculate stripe medially and sometimes a pair of narrow immaculate stripes laterally in *U. zambezicus*, sp. nov., but are almost entirely infuscate in *U. malawicus*, sp. nov., and *U. katangensis*, sp. nov. The chelicerae, pedipalp trochanter, femur, patella, and legs are entirely immaculate in *U. zambezicus*, sp. nov., whereas the dorsal surfaces of the chelicerae, lateral surfaces of the pedipalp patella, and often dorsal and prodorsal surfaces of the pedipalp femur and trochanter, as well as dorsal and retrolateral surfaces of the leg femora, patellae, and tibia are partially infuscate in *U. malawicus*, sp. nov. Metasomal segment IV is often paler in *U. zambezicus*, sp. nov., than in *U. malawicus*, sp. nov. *Uroplectes zambezicus*, sp. nov., differs further from *U. katangensis*, sp. nov., in the lower counts of median denticle subrows on the fixed and movable fingers of the pedipalp chela (11 or 12 vs. 13, respectively), and from *U. malawicus*, sp. nov., in the less numerous and pronounced spiniform granules in the distal half of the chela manus prodorsal surface in the adult male.

Description: The following account, which is based on the type material, describes only those characters that differ from *U. malawicus*, sp. nov.

Total length: Adult: small, maximum length, measured from anterior margin of carapace to tip of aculeus, 23 mm (20–27 mm, $n = 6$) (♂), 26 mm (24–27 mm, $n = 6$) (♀) (table 2).

Color: As for *U. malawicus*, sp. nov., except as follows (figs. 2D, F, 12). Chelicerae, pedipalp trochanter, femur, patella, and legs entirely immaculate. Carapace mostly infuscate except for a pair of narrow immaculate stripes laterally in some specimens. Tergites mostly infuscate except for narrow immaculate stripe medially and, in some specimens, a pair of narrow immaculate stripes laterally.

TABLE 2. Meristic data for six males and six females of *Uroplectes zambezicus*, sp. nov., in the collections of the American Museum of Natural History, New York (AMNH) and the Natural History Museum of Zimbabwe, Bulawayo (NHMZ). Measurements (mm) follow Prendini (2004a, 2004b, 2004c, 2005b). [1]Sum of carapace, tergites I–VII, metasomal segments I–V, and telson; [2]distance from anterior carapace margin; [3]sum of metasomal segments I–V and telson; [4]distance from base of condyle to tip of fixed finger.

Specimen	sex	♂	♂	♂	♂	♂	♂	♀	♀	♀	♀	♀	♀
	type	Holo.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Para.
	coll.	AMNH	AMNH	NHMZ	NHMZ	NHMZ	NHMZ	AMNH	AMNH	NHMZ	NHMZ	NHMZ	NHMZ
	number			S97/2	S84/89	S90/17	S89/3			S99/17	S86/5	S85/17	S97/11
Total length[1]		22.6	26.0	22.0	20.8	26.6	20.2	25.5	26.0	24.6	27.2	24.4	26.8
Carapace	median ocelli[2]	0.9	1.1	0.8	0.7	1.0	0.8	1.0	1.0	0.9	1.0	0.9	1.1
	length	2.5	3.0	2.4	2.1	2.9	2.2	2.8	2.8	2.7	3.0	2.6	2.8
	anterior width	1.3	1.7	1.3	1.2	1.5	1.2	1.7	1.7	1.6	1.7	1.5	1.7
	posterior width	2.5	3.3	2.5	2.2	2.8	2.3	3.1	3.1	2.0	3.3	3.1	3.1
Tergite I	length	0.4	0.6	0.4	0.5	0.5	0.4	0.6	0.6	0.5	0.5	0.5	0.5
Tergite II	length	0.6	0.8	0.6	0.7	0.7	0.6	0.8	0.8	0.8	0.9	0.8	0.8
Tergite III	length	0.8	1.0	0.8	0.9	1.0	0.8	1.2	1.2	1.1	1.2	1.1	1.1
Tergite IV	length	1.0	1.2	1.0	1.0	1.2	0.9	1.3	1.4	1.3	1.4	1.3	1.4
Tergite V	length	1.1	1.3	1.1	1.1	1.4	1.0	1.4	1.5	1.4	1.5	1.5	1.6
Tergite VI	length	1.2	1.4	1.2	1.2	1.5	1.1	1.5	1.6	1.5	1.6	1.6	1.6
Tergite VII	length	1.7	1.6	1.6	1.5	2.0	1.5	1.8	1.8	1.9	2.0	1.8	1.8
Sternite VII	length	1.6	1.6	1.4	1.4	2.0	1.2	1.7	1.6	1.7	1.8	1.4	1.8
	width	2.4	3.3	2.2	2.2	2.7	2.0	3.2	3.1	3.0	3.3	2.9	3.2
Mesosoma	total length	6.7	7.8	6.5	6.7	8.3	6.3	8.5	8.8	8.3	9.1	8.4	8.7
Metasoma I	length	1.8	2.1	1.9	1.6	2.1	1.5	1.9	1.9	1.8	2.0	1.8	2.0
	width	1.6	2.0	1.6	1.5	1.9	1.4	2.0	2.0	1.9	2.2	1.9	2.1
	height	1.3	1.6	1.3	1.3	1.5	1.2	1.6	1.6	1.6	1.7	1.6	1.7
Metasoma II	length	2.1	2.4	2.1	1.9	2.5	1.9	2.1	2.2	2.1	2.4	2.0	2.3
	width	1.7	2.1	1.7	1.5	2.0	1.5	2.2	2.1	2.0	2.3	1.9	2.2
	height	1.4	1.7	1.4	1.4	1.6	1.3	1.8	1.7	1.6	1.8	1.6	1.7
Metasoma III	length	2.1	2.5	2.2	2.0	2.6	2.0	2.4	2.4	2.3	2.5	2.1	2.6
	width	1.8	2.2	1.8	1.6	2.0	1.5	2.3	2.2	2.1	2.4	2.0	2.3
	height	1.5	1.7	1.5	1.5	1.7	1.4	1.9	1.8	1.6	1.8	1.6	1.8

Specimen	sex	♂	♂	♂	♂	♂	♂	♀	♀	♀	♀	♀	♀
	type	Holo.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Para.	Para.
Metasoma IV	length	2.4	2.7	2.4	2.2	3.0	2.2	2.6	2.6	2.5	2.8	2.5	2.8
	width	1.8	2.3	1.8	1.6	2.1	1.5	2.3	2.2	2.1	2.4	2.0	2.3
	height	1.5	1.8	1.4	1.4	1.8	1.4	1.9	1.8	16.0	1.8	1.6	1.8
Metasoma V	length	2.6	2.8	2.5	2.3	2.8	2.3	2.7	2.8	2.6	2.9	2.6	2.8
	width	1.8	2.2	1.8	1.6	2.1	1.5	2.3	2.2	2.1	2.4	2.0	2.3
	height	1.4	1.7	1.3	1.3	1.6	1.3	1.8	1.8	1.5	1.8	1.4	1.7
Metasoma	total length[3]	10.9	12.5	11.0	9.8	12.9	9.8	11.6	11.7	11.2	12.5	10.9	12.4
Telson	total length	2.5	2.8	2.2	2.2	2.6	2.0	2.7	2.7	2.5	2.7	2.5	3.0
	vesicle length	1.5	1.7	1.3	1.3	1.6	1.2	1.6	1.7	1.4	1.7	1.4	1.8
	vesicle width	1.2	1.4	1.0	1.0	1.3	1.0	1.3	1.9	1.2	1.4	1.2	1.4
	vesicle height	0.9	1.1	0.9	0.8	1.0	0.8	1.1	1.1	1.0	1.1	1.0	1.1
	aculeus length	1.0	1.1	0.9	1.0	1.0	0.9	1.1	1.0	1.1	1.0	1.1	1.2
Femur	length	2.2	2.5	2.0	1.8	2.5	1.9	2.4	2.4	2.3	2.5	2.3	2.5
	width	0.7	0.9	0.7	0.6	0.8	0.6	0.9	0.9	0.7	0.8	0.8	0.9
	height	0.7	0.8	0.6	0.5	0.6	0.6	0.8	0.7	0.8	0.8	0.8	0.8
Patella	length	2.5	2.8	2.3	2.2	2.8	2.2	2.8	2.9	2.5	2.8	2.6	2.8
	width	0.9	1.1	0.9	0.8	1.0	0.8	1.1	1.1	1.0	1.1	1.0	1.1
	height	0.8	0.9	0.7	0.7	0.8	0.6	0.8	0.9	0.9	0.9	0.9	0.8
Chela	length[4]	4.1	4.8	3.6	3.5	4.5	3.3	4.7	4.6	4.3	4.5	4.4	4.7
	width	1.0	1.1	0.8	0.8	1.2	0.8	1.1	1.1	1.0	1.1	0.9	1.0
	height	1.0	1.1	0.8	0.7	1.2	0.8	1.0	1.1	0.9	1.0	0.9	0.9
	length retrovent. carina	1.8	1.8	1.5	1.4	2.0	1.4	1.7	1.6	1.6	1.7	1.6	1.8
	length mov. finger	2.7	2.0	2.5	2.3	2.8	2.3	3.0	2.6	2.9	3.0	3.0	3.1
	subrows fixed finger	11/11	12/12	11/11	11/11	12/12	11/11	11/11	11/11	11/11	11/11	11/11	11/11
	subrows mov. finger	12/12	13/13	12/12	12/12	12/12	12/12	12/13	12/12	12/12	12/12	12/12	-/12
Pectines	total length	2.0	2.3	2.0	2.0	2.3	1.5	2.2	2.2	2.2	2.4	2.3	2.4
	length dentate margin	2.1	2.8	2.0	2.0	2.3	1.6	2.4	2.3	2.3	2.5	2.3	2.4
	tooth count	17/18	16/15	17/17	16/17	16/16	16/16	16/16	16/15	16/17	16/16	16/16	17/16

Carapace: As for *U. malawicus*, sp. nov., except as follows (fig. 3C, D). Anterior width of posterior width, 52% (51%–46%, *n* = 6) (♂), 56% (47%–78%, *n* = 6) (♀) (table 2); posterior width of length, 104% (96%–110%, *n* = 6) (♂), 106% (75%–119%, *n* = 6) (♀). Median ocular tubercle, distance from anterior carapace margin 41% (*n* = 6) (♂), 40% (*n* = 6) (♀) of carapace length.

Pedipalps: As for *U. malawicus*, sp. nov., except as follows (fig. 13). Femur width of length, 32% (30%–34%, *n* = 6) (♂), 34% (30%–36%, *n* = 6) (♀) (table 2). Patella width of length, 37% (35%–40%, *n* = 6) (♂), 39% (38%–40%, *n* = 6) (♀). Chela manus, width of height, 102% (100%–107%, *n* = 6) (♂), 108% (100%–116%, *n* = 6) (♀); width of length along ventroexternal carina, 57% (54%–62%, *n* = 6) (♂), 62% (56%–67%, *n* = 6) (♀); length along ventroexternal carina of length movable finger, 68% (59%–90%, *n* = 6) (♂), 57% (53%–63%, *n* = 6) (♀). Manus surfaces smooth except prodorsal surface with relatively dense spiniform granules, more numerous and pronounced in distal half (♂) (fig. 13E–H) or few small scattered spiniform granules (♀). Fixed and movable fingers, median denticle rows respectively comprising 11 (11–12, *n* = 12) and 12 (12–13, *n* = 12) oblique denticle subrows.

Pectines: As for *U. malawicus*, sp. nov., except as follows (fig. 4E, F). Pectinal teeth curved, all similar in size (♂) or basal pectinal tooth enlarged, approximately twice the size of other teeth (♀); tooth count, 16/17 (15–17/15–18, *n* = 12) (♂), 16/16 (15–17/16–17, *n* = 12) (♀) (table 2).

Mesosoma: As for *U. malawicus*, sp. nov., except as follows. Sternite VII, length of width, 62% (49–74%, *n* = 6) (♂), 53% (48–57%, *n* = 6) (♀) (table 2).

Metasoma and telson: As for *U. malawicus*, sp. nov., except as follows (figs. 7B, D, 8B, D, 9B, D). Metasomal segment V, width of segment I, width, 109% (107%–114%, *n* = 6) (♂), 109% (105%–113%, *n* = 6) (♀) (table 2). Metasoma width of length, segment I, 92% (84%–98%, *n* = 6) (♂), 107% (103%–110%, *n* = 6) (♀); II, 81% (78%–88%, *n* = 6) (♂), 96% (93%–102%, *n* = 6) (♀); III, 80% (75%–88%, *n* = 6) (♂), 92% (87%–96%, *n* = 6) (♀); IV, 74% (70%–83%, *n* = 6) (♂), 84% (80%–87%, *n* = 6) (♀); V, 71% (67%–79%, *n* = 6) (♂), 81% (80%–85%, *n* = 6) (♀). Telson vesicle, width of metasomal segment V, 62% (57%–66%, *n* = 6) (♂), 64% (58%–86%, *n* = 6) (♀); height of length, 64% (60%–68%, *n* = 6) (♂), 65% (62%–70%, *n* = 6) (♀). Aculeus length of vesicle length, 70% (65%–76%, *n* = 6) (♂), 69% (59%–81%, *n* = 6) (♀). Length metasoma and telson, of total length, 59% (56%–60%, *n* = 6) (♂), 56% (55%–57%, *n* = 6) (♀).

Distribution: Presently recorded from five localities in Mozambique, one in Zambia and thirteen in Zimbabwe (fig. 1). All known locality records fall within the Zambezi River Valley.

Ecology: The known material was collected in arid savanna, dominated by the mopane tree, *Colophospermum mopane* (Benth.) J. Léonard, in the Zambezi River Valley. Zimbabwean material deposited in the NHMZ was collected under tree bark and logs, and in pitfall traps. Recently collected material originates from three localities at elevations of 150–360 m in the vicinity of Tete, Mozambique, and a fourth locality, at an elevation of 442 m, north of the junction of the Kafue and Zambezi rivers, in Zambia. The two Mozambican localities at

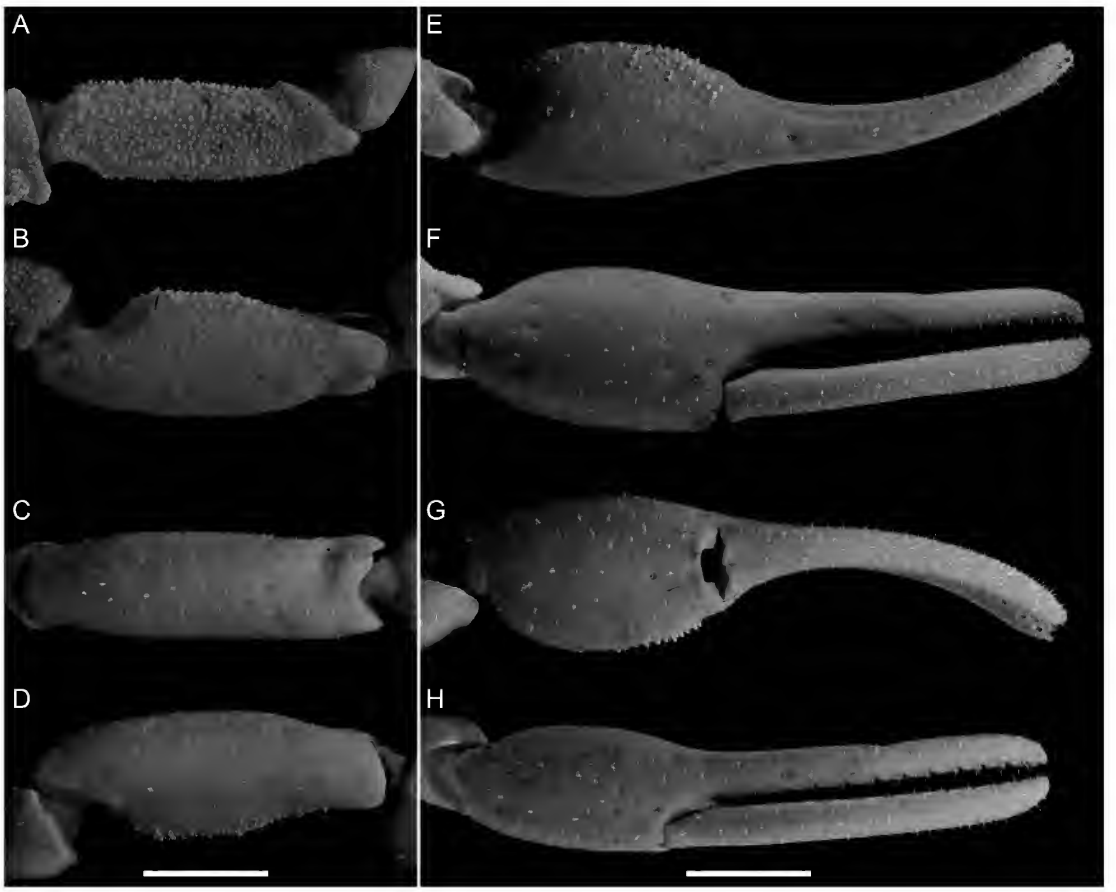

FIGURE 13. Dextral pedipalp segments of *Uroplectes zambezicus*, sp. nov., paratype ♂ (AMNH), Zambezi River, Mozambique (**A–G**) and paratype ♀ (AMNH), same locality. (**H**). **A.** Femur, dorsal aspect. **B–D.** Patella, dorsal (**B**), retrolateral (**C**) and ventral (**D**) aspects. **E–H.** Chela, dorsal (**E**), retrolateral (**F, H**) and ventral (**G**) aspects. Scale bars = 1 mm.

which material was collected by the author differ in habitat. The habitat near Tete was fairly dense mixed broadleaf woodland with baobab trees, *Adansonia digitata* L. (fig. 2C), on alluvial silty-loam soil, around the base and on the lower slopes of a rocky hill. Specimens were collected with UV light detection on a warm and humid, moonless night, running on the ground surface, especially in leaf litter under the tree canopy (fig. 2E). The habitat on the north side of the Zambezi River was more open, arid mopane woodland with scattered shale and sandstone outcrops, also on alluvial silty-loam soil. One specimen was found under a small stone during the day. The others were found with UV detection on a warm, still, moonless, humid night, running or walking on the ground surface, mainly in leaf litter around the base of bushes and in rocky areas. The material from Zambia was collected in reptile traps (bucket pitfall traps) in mopane woodland (W. Conradie, personal commun.). The habitat and habitus (figs. 2D, F, 12) of *U. zambezicus*, sp. nov., are consistent with the lapidicolous and corticolous ecomorphotypes (Prendini, 2001). Five buthids, *Hottentotta trilineatus*, *Para-*

buthus mossambicensis (Peters, 1861), *Uroplectes flavoviridis*, *U. planimanus*, and *U. xanthogrammus*, a hormurid, *Hadogenes troglodytes*, and two scorpionids, *Opistophthalmus carinatus* (Peters, 1861) and *O. glabrifrons*, were collected in sympatry at one or more of the collection localities in Mozambique and Zimbabwe.

NEW AND OLD SYNONYMS IN *UROPLECTES*

During the present investigation, the new material was compared with the types of *U. chubbi* and the following taxa, either putatively related to *U. chubbi* or originating from the same geographical region, to verify that the new species in question had not been previously described: *Scorpiobuthus apatris* Werner, 1939, synonymized with *U. chubbi* by Fet and Sissom (1997); *Uroplectes andreae* Pocock, 1899; *Uroplectes chubbi briodi* Schenkel, 1932; *Uroplectes jutrzenkai* Penther, 1900, synonymized with *Uroplectes vittatus* (Thorell, 1876) by Hewitt (1918) and later by Newlands (1970); and *Uroplectes schubotzi* Kraepelin, 1929. Based on comparison of these specimens with one another (only digital photos of the holotype of *U. schubotzi* were available) and with nontype material, two synonyms were confirmed and two are newly presented.

Uroplectes chubbi Hirst, 1911

Uroplectes chubbi Hirst, 1911: 5–6.
Scorpiobuthus apatris Werner, 1939: 361–362 (synonymized by Fet and Sissom, 1997: 408).

Type Material: Lectotype ♀ [here designated], 9 juv. ♂, 2 juv. ♀ paralectotypes (BMNH 1911.8.11.1), **ZIMBABWE:** Rhodesia, E.C. Chubb. *Scorpiobuthus apatris* Werner, 1939: Lectotype ♀ [designated by Fet and Sissom, 1997: 408] (ZFMK 350), paralectotype ♀ (ZFMK 351).

Additional Material: **ZIMBABWE: Masvingo Province:** *Chiredzi District*: Gona-re-Zhou National Park: Chipinda Pools Camp, 21°17′06.8″S 31°54′49.7″E, 292 m, 7.ii.2013, L. Prendini, F. Nyathi, and N. Scott, 3 ♂, 1 ♀ (AMNH); Triangle Ranch, Mutirikwi River intersection with road Ngundu Halt–Triangle, ca. 4 km W of Triangle, W side of Mutirikwi River, 21°02′28.5″S 31°23′26.0″E, 390 m, 6–7.ii.2013, L. Prendini, F. Nyathi, and N. Scott, 3 ♂, 3 ♀, 2 subad. ♂, 1 subad. ♀ (AMNH). **Matabeleland South Province:** *Gwanda District*: Doddieburn Ranch, Sibizini Dam [21°24′S 29°22′E], 17.xii.1985, J.L. Minshull, 1 ♀ (NHMZ S86/47); Dwala Ranch, Bubiana Conservancy [19°05′S 29°43′E], 28.xi.1993, Raleigh International, 2 ♂, 9 ♀, 8 juv. (NHMZ S94/108).

Remarks: The type material of *S. apatris*, based on two specimens without locality data, was found to be morphologically indistinguishable and therefore conspecific with type and nontype material of *U. chubbi*, confirming the synonymy by Fet and Sissom (1997): *Scorpiobuthus apatris* Werner, 1939 = *Uroplectes chubbi* Hirst, 1911.

Uroplectes occidentalis Simon, 1876

Uroplectes occidentalis Simon, 1876: 219–220.
Tityus chinchoxensis Karsch, 1879: 370–372 (synonymized by Kraepelin, 1899: 57).
Uroplectes andreae Pocock, 1899: 835, **new synonym**.

Type Material: *Uroplectes andreae* Pocock, 1899, holotype ♀ (BMNH 1900.9.10.1), **DEMOCRATIC REPUBLIC OF CONGO: Kasai Province:** Kassai [Kasai], on Loange River, Upper Congo.

Additional Material: **ANGOLA:** 1 ♀ (NMSA 18679 ex ANG 3544/4960). **DEMOCRATIC REPUBLIC OF CONGO:** J.C. Heymans, 1 ♀ [homotype] (NMSA 11027), 2 ♂, 1 ♀ (NMSA 11028), 1 ♂ (NMSA 11029); Sandra, 1932, G.F. Overlaet, 5 ♀ (MRAC 23.939/943), 1 ♂, 4 ♀, 1 subad. ♀ (MRAC 23.944/949). **Kasai Province:** N Kasai, Ikese, 8.v.1946, Lagae, 1 ♂, 1 ♀ (MRAC 135.115). **Lualaba Province:** Kisenge, Dilolo [10°41′S 22°21′E], ix.1963, A. Regnard, 1 ♂, 3 ♀, 1 juv. ♀ (MRAC 126.086). **Tanganyika Province:** Mpala [06°45′S 29°31′E], 6.vii.1953, H. Bomans, 3 ♂, 1 ♀ (MRAC 75.966), viii.1953, 1 ♂, 3 ♀, 1 juv. ♂ (MRAC 85.143–147).

Remarks: The holotype of *U. andreae* was compared with nontype material of *U. occidentalis* from across the known distribution of the species, including one specimen from Angola and five from the Democratic Republic of Congo in the NMSA determined as *U. andreae* by B.H. Lamoral in 1977, among them a "homotype," accompanied by a note stating "compared to holotype female of *Uroplectes andreae* (BMNH 1900.9.10.1) by B. Lamoral, 1977, and found to be conspecific." Although poorly preserved, the holotype of *U. andreae* closely resembled other material in the BMNH labelled "*U. occidentalis* var. *andreae*" based on the presence of spiniform granules on the dorsosubmedian carinae of metasomal segments IV and V, the diagnostic characters provided by Pocock (1899) to separate *U. andreae* from *U. occidentalis*, typical specimens of which exhibit spiniform granules on the dorsosubmedian carinae of segments I–III only. As the presence and development of spiniform granules on segments IV and V was observed to vary among otherwise morphologically similar specimens of *U. occidentalis*, and no other diagnostic differences appear to separate *U. andreae* from the latter, they are considered conspecific and newly synonymized: *Uroplectes andreae* Pocock, 1899 = *Uroplectes occidentalis* Simon, 1876, new synonym.

Uroplectes schubotzi Kraepelin, 1929

Uroplectes schubotzi Kraepelin, 1929: 89.

Type Material: *Uroplectes schubotzi* Kraepelin, 1929: holotype ♀ [juv.?] (ZMH), **CENTRAL AFRICAN REPUBLIC: Nana-Grébizi Prefecture:** Fort Crampel [Kaga-Bandoro, 06°59′N 19°11′E], French Congo, 9.i.1911, Schubotz.

Remarks: Only digital photos of the holotype of *U. schubotzi* were available at the time of the present investigation. It is unclear whether the specimen is adult, and the status of this

species, which appears to have affinities with the West African genus *Butheoloides* Hirst, 1925, requires further investigation.

Uroplectes vittatus (Thorell, 1876)

Lepreus vittatus Thorell, 1876: 121–122.
Uroplectes jutrzenkai Penther, 1900: 157–158 (synonymized by Hewitt, 1918: 122; also see Newlands, 1970: 202).
Uroplectes chubbi briodi Schenkel, 1932: 386–387, **new synonym**.

Type Material: *Uroplectes chubbi briodi* Schenkel, 1932: lectotype ♂ [designated by Forcart, 1961: 49], 2 ♀ paralectotypes (NMB 78-I-a), **ZAMBIA: Western Province:** Sefula [15°17′S 23°09′E]. *Uroplectes jutrzenkai* Penther, 1900: lectotype ♂ [here designated], 1 ♂, 2 ♀ paralectotypes (NHMW 2342), **SOUTH AFRICA:** eastern Transvaal, R. Jutrzenka.

Additional Material: **BOTSWANA: Central District:** *Bobonong Subdistrict*: Limpopo Lodge, 5.4 km SW turnoff to Platjan on Martin's Drift/Baines Drift–Pont Drift road, 22°27′01.5″S 28°46′10.8″E, 700 m, 21–22.ii.2011, L. Prendini and P. Gildenhuys, 1 ♂ (AMNH). **SOUTH AFRICA: Limpopo Province:** *Soutpansberg District*: Farm Gansvley 335, 15 km S Alldays intersection Waterhout and Withaak streets, 22°48′37.2″S 29°05′21.5″E, 802 m, 22.ii.2011, L. Prendini and P. Gildenhuys, 1 ♂, 4 ♀, 1 subad. ♂, 1 subad. ♀ (AMNH). *Warmbad District*: Rust de Winter Dam Nature Reserve, camping area on N side of dam, 25°13′30.4″S 28°29′36.3″E, 1046 m, 3.i.2013, L. Prendini and M.I. Cooper, 5 ♂, 9 ♀, 1 subad. ♀ (AMNH). **Northern Cape Province:** *Kimberley District*: Farm Kenilworth Estate 71 (Dronfield Nature Reserve), Dronfield Camp, 28°37.108′S 24°48.489′E, 1214 m, 28.xii.2007, L. Prendini and M.I. Cooper, 10 ♂, 8 ♀, 1 subad. ♂, 1 subad. ♀ (AMNH). **ZIMBABWE: Mashonaland West Province:** *Zvimba District*: Farm Kintyre, Kuimba Shiri Bird Park, Admiral's Cabin, Lake Chivero, 17°52′05.0″S 30°48′04.9″E, 1370 m, 15.ii.2013, L. Prendini, F. Nyathi, and N. Scott, 13 ♂, 17 ♀, 2 juv. ♂, 2 juv. ♀ (AMNH).

Remarks: The type material of *U. chubbi briodi* and *U. jutrzenkai* was found to be morphologically indistinguishable and therefore conspecific with nontype material of *U. vittatus* from across the known distribution of the species, on the basis of which the former is newly synonymized, and the synonymy of the latter, by Hewitt (1918) and Newlands (1970), confirmed: *Uroplectes chubbi briodi* Schenkel, 1932 = *Uroplectes vittatus* (Thorell, 1876), new synonym; *Uroplectes jutrzenkai* Penther, 1900 = *Uroplectes vittatus* (Thorell, 1876).

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